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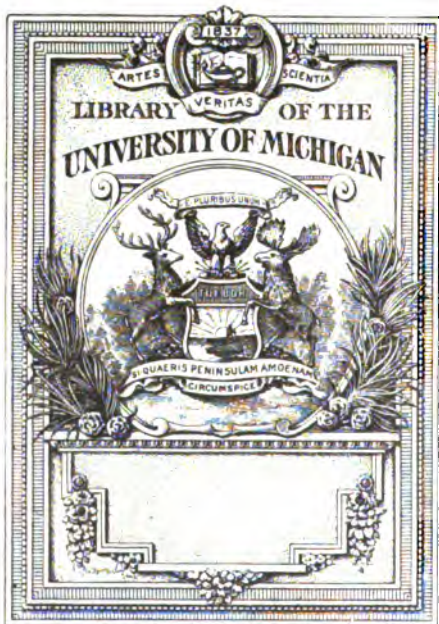
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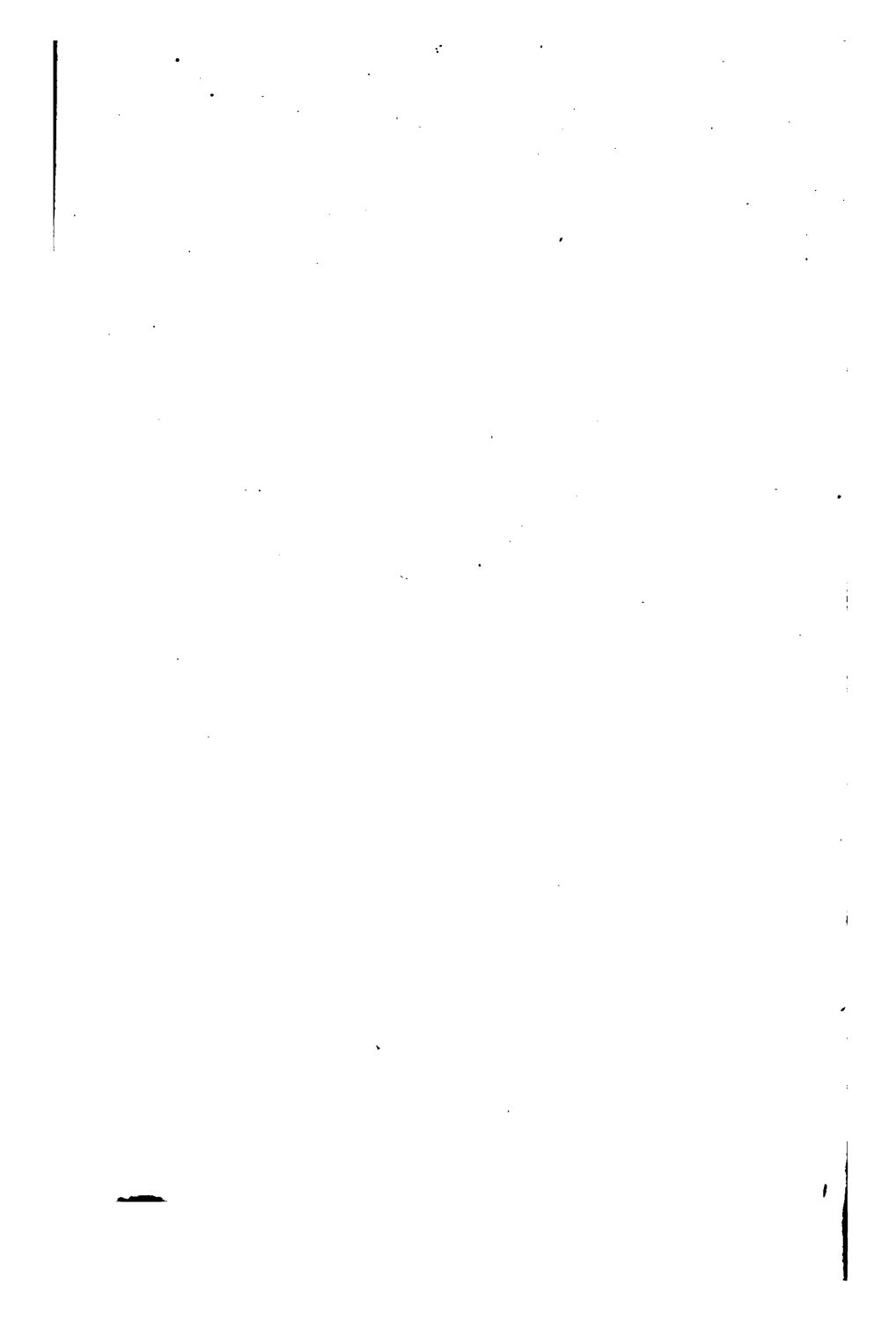
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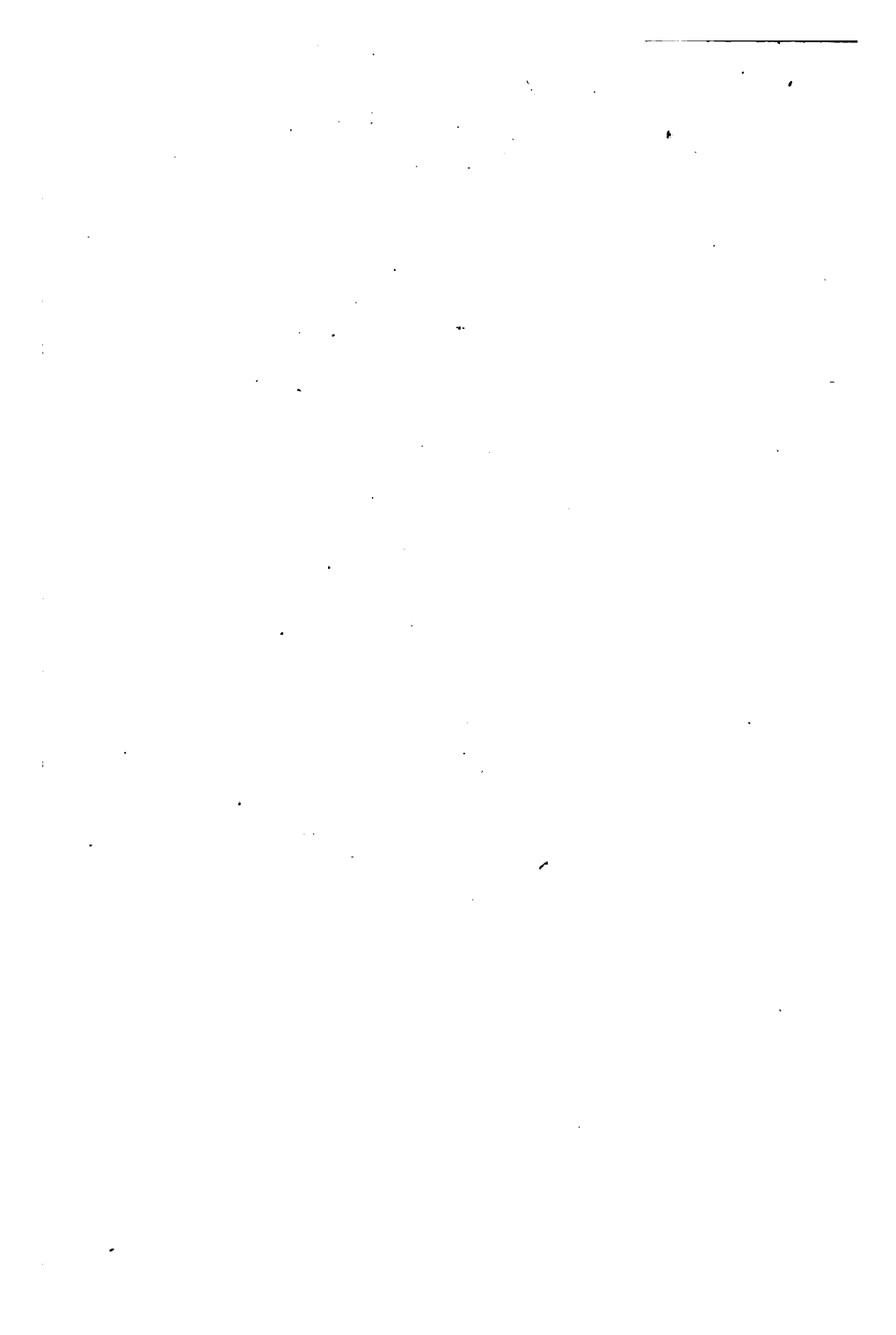
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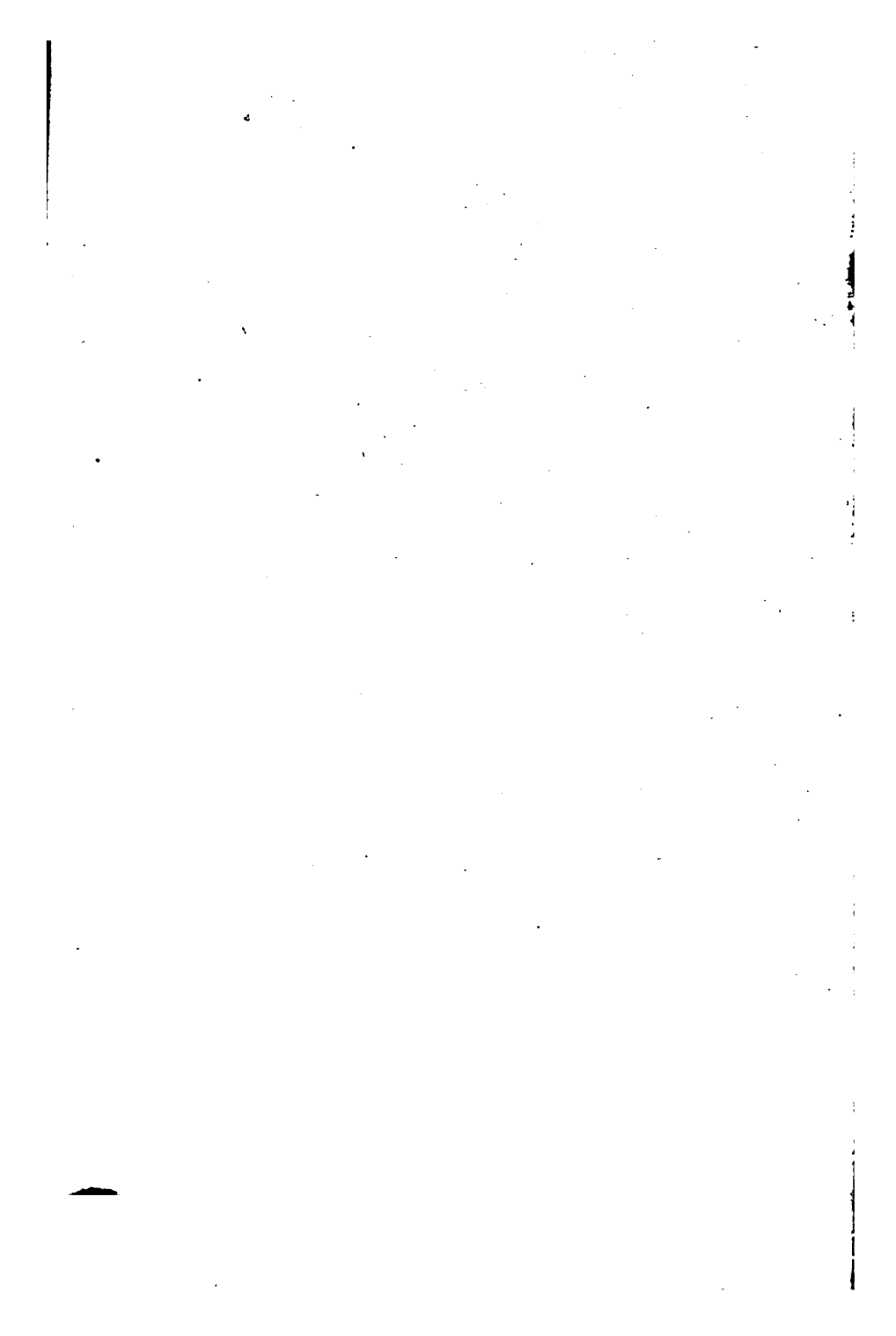
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OF THE

State University of Iowa



IOWA CITY, IOWA

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IOWA CITY, IOWA

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OF THE

STATE UNIVERSITY OF IOWA

IOWA CITY, IOWA

1899-1900

With Announcements for 1900-1901

PUBLISHED BY THE UNIVERSITY
1900

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CALENDAR FOR 1900-1901.

1900.

- June 1—Anniversary of Literary Societies, 8 P. M., Friday.
June 3—Baccalaureate Address, 4 P. M., Sunday.
June 4—Class Day Exercises, Monday.
Commencement, Dental Department.
Battalion Drill and Dress Parade, 4 P. M.
June 5—Alumni Day, Tuesday.
Alumni Meeting, 2 P. M.
June 6—Commencement, Law Department, 10 A. M., Wednesday.
June 7—Commencement, Collegiate Department, 10 A. M., Thursday.
June 8-9—Registration for Summer Session, Friday.
June 11—Summer Session begins, Monday.
July 20-21 Examination by State Board of Educational Examiners.
July 21—Summer Session ends.

SUMMER VACATION.

- September 18—Examinations for Admission, Tuesday.
September 19—Fall Term begins, all Departments, Wednesday.
September 20—University Convocation, 4 P. M., Thursday.
November 28—Thanksgiving Day Recess.
December 21—Fall Term ends, Friday.

WINTER VACATION.

1901.

- January 2—Winter Term begins, Wednesday.
February 22—University Convocation, 10 A. M., Friday.
March 28—Winter Term ends, Thursday.
March 28—Commencement, Homœopathic Medical Department, Tuesday.
March 29—Commencement, Medical and Pharmacy Departments, Wednesday.
April 2—Spring Term begins, Tuesday.
June 1—Anniversary of Literary Societies, 8 P. M., Friday.
June 9—Baccalaureate Address, 4 P. M., Sunday.
June 10—Class Day Exercises, Monday.
Commencement, Dental Department.
June 11—Alumni Day, Tuesday.
Alumni Meeting, 2 P. M.
Alumni Dinner, 6 P. M.
June 12—Commencement, Law Department, 10 A. M., Wednesday.
June 13—Commencement, Collegiate Department, 10 A. M., Thursday.
Sept. 17—Examinations for Admission, Tuesday.

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HARRY S. RICHARDS, LL. B., Secretary of the Law Faculty.
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FREDERICK SOPHUS HOLSTEEN, PH. B., Commander of the Cadet Battalion.

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FLORENCE E. BROWN, PH. B., Superintendent of the University Hospital.

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AND OTHER OFFICERS.**

GEORGE EDWIN MACLEAN, B. A., 1871; M. A., 1874, Williams;
B. D., 1877, Yale; Ph. D., 1893, Leipzig; LL. D., 1895,
Williams.

President 1899.* 603 College St. (Central Bldg).

AMOS NOYES CURRIER, B. A., 1856; M. A., 1859, Dartmouth; LL.
D., 1893, Des Moines.

Professor of Latin Language and Literature, and Dean of the Collegiate
Faculty, 1867. 32 Bloomington St. (7 Central Bldg).

PHILO JUDSON FARNSWORTH, B. A., 1854; M. A., 1857; M. D., 1858,
Vermont; M. D., 1860, Coll. Phys. and Sur., New York.

Emeritus Professor of Materia Medica and Diseases of Children in the
Medical Department, 1868.

JOHN CLINTON SHRADER, M. D., 1865, Coll. Phys. and Sur., Keo-
kuk; Long Island Coll. Hospital, Brooklyn, N. Y.; M. A.,
1877; LL. D., 1894, Western Coll.

Emeritus Professor of Obstetrics and Diseases of Women, 1869.
811 College St.

WILLIAM DRUMMOND MIDDLETON, M. D., 1868, Bellevue, N. Y. ;
M. A., 1885, Iowa.

Professor of Surgery in the Medical Department, and Dean of the Medical
Faculty, 1869. Davenport, Ia. (University Hospital).

SAMUEL CALVIN, M. A., 1874, Cornell; Ph. D., 1888, Lenox.

Professor of Geology, 1874. 522 No. Clinton St. (Science Hall, first floor).

EMLIN MCCLAIN, Ph. B., 1871; A. B., 1872; LL. B., 1873; M. A.,
1882; LL. D., 1891, Iowa; LL. D., 1891, Findlay Coll.

Professor of Law, and Chancellor of the Law Department, 1881.
8 Bloomington St. (14 Central Bldg).

THOMAS HUSTON MACBRIDE, B. A., 1869, Monmouth; M. A., 1873,
Monmouth; Ph. D., 1895, Lenox.

Professor of Botany. 728 Washington St. (Science Hall, second floor).

JAMES GRANT GILCHRIST, M. D., 1863, Pennsylvania, M. A., 1890.

Professor of Surgery, and Surgical Gynecology, and Registrar of the Homœo-
pathic Medical Faculty, 1882. 215 College St. (Homœopathic Hospital).

EMIL LOUIS BOERNER, Ph. G., 1876, Philadelphia Coll. of Phar. ;
Phar. D., 1896, Iowa.

Professor of Practical Pharmacy, and Dean of the Pharmacy Faculty, 1885.
425 No. Dubuque St. (Pharmacy Laboratory).

*Date following title indicates year of appointment to service in the University.

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LAUNCELOT WINCHESTER ANDREWS, PH. B., 1875, Yale; M. A., PH. D., 1882, Goettingen.

Professor of Chemistry, 1885. S. Johnson St. (Chemical Laboratory).

CHARLES HERBERT COGSWELL, M. D., Hahnemann Coll., Chicago.

Professor of Obstetrics and Diseases of Children in the Homœopathic Medical Department, 1885. Cedar Rapids, Ia. (Hom. Med. Hospital).

GEORGE THOMAS WHITE PATRICK, B. A., 1878, Iowa; B. D., 1885, Yale; PH. D., 1888, Johns Hopkins.

Professor of Philosophy, 1887. 704 N. Dubuque St. (Psychological Lab).

CHARLES BUNDY WILSON, B. A., 1884; M. A., 1886, Cornell Univ.

Professor of German Language and Literature, and Secretary of the College Faculty, 1888. 919 E. College St. (6 Central Bldg).

LAWRENCE WILLIAM LITTIG, B. A., 1880; M. A., 1882, St. Vincent's Coll.; M. D., 1883, Iowa; M. R. C. S., 1887, England.

Professor of Theory and Practice of Medicine, and Clinical Medicine in the Medical Department, 1889. 102 So. Linn St.

ANDREW ANDERSON VELEN, B. A., 1877; M. A., 1880, Carleton College.

Professor of Physics, 1889. 707 N. Dubuque St. (Physics Bldg).

LAENAS GIFFORD WELD, B. S., 1883; M. A., 1885, Iowa.

Professor of Mathematics, 1887. 612 N. Dubuque St. (West Bldg., 2d floor).

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Professor of Zoology, and Curator of the Museum of Natural History, 1886. 922 E. Washington St. (Science Hall, third floor).

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Professor of Obstetrics and Gynecology in the Medical Department, 1880.

ISAAC ALTHAUS LOOS, B. A., 1876; M. A., 1879, Otterbein; B. D., 1881, Yale; D. C. L., 1898, Penn. Coll.

Professor of Political Science, 1899. 22 E. Bloomington St. (4 Central Bldg).

SAMUEL HAYES, B. S., 1869; M. S., 1876, Michigan; LL. B., 1891, Iowa.

Professor of Law, 1891. N. Dubuque St. (11 Central Bldg).

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Professor of Pedagogy, 1891. 331 Summit St. (Clinton Street Bldg).

ELBERT WILLIAM ROCKWOOD, B. S., 1884, Amherst; M. D., 1895, Iowa.

Professor of Chemistry and Toxicology, 1888. 1011 Woodlawn. (Chem. Lab).

GEORGE ROYAL, M. D., 1882, N. Y. Hom. Med. Coll.

Professor of Materia Medica and Therapeutics in the Homœopathic Medical Department, and Dean of the Faculty, 1892. 1234 Sixth Ave., Des Moines, Ia. (Hom. Hospital).

JAMES WILLIAM DALBEY, B. S., 1885, Illinois Coll., M. D., 1888.

Professor of Ophthalmology in the Medical Department, 1889.
Cedar Rapids, Ia. (Faculty Room, Med. Bldg).

**CHARLES SUMNER CHASE, B. A., 1871, Cedar Valley Sem.; B. S.,
I. S. C., Ames; M. A., 1876, Iowa; M. D., 1882, Rush Medical
Coll.**

Professor of Materia Medica and Therapeutics in the Medical Department,
1892. Waterloo, Ia. (Faculty Room, Med. Bldg).

**FRANK JOHN NEWBERRY, M. D., 1888, Chicago Hom. Med. Coll.;
M. D., 1891, Illinois Medical; M. S., 1893, Upper Iowa
University; O. et A. Chir., 1890, N. Y. Ophthalmic.**

Professor of Ophthalmology, Otolaryngology, and Pathology in the Homœopathic
Medical Department, 1890. 3 Summit St. (Hom. Hospital).

WALTER LAWRENCE BIERRING, M. D., 1892, Iowa.

Professor of Bacteriology and Pathology, 1893.
Cor. Governor St. and Iowa Ave. (Medical Hall).

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Rochester.**

Professor of History, 1894. 629 N. Dubuque St. (10 So. Hall).

FRANK THOMAS BREENE, D. D. S., 1883; M. D., 1893, Iowa.

Professor of Operative and Clinical Dentistry, and Therapeutics, 1888.
215 N. Dubuque St. (Dental Hall).

WILLIAM S. HOSFORD, B. A., 1883; D. D. S., 1892, Iowa.

Professor of Dental Prosthesis, and Dean of the Dental Faculty, 1883.
505 College St. (1 Dental Hall).

FREDERIC C. L. VAN STEENDEREN, M. A., 1893, Penn Coll.

Professor of French Language and Literature, 1893.
309 Church St. (8 South Hall).

ALFRED VARLEY SIMS, C. E., 1888, Univ. of Pennsylvania.

Professor of Civil Engineering, 1895.
Bloom Terrace. (South Hall, first floor).

JOHN WALTER HARRIMAN, M. D., 1891, Iowa.

Professor of Anatomy, and Director of Hospital, Medical Department, 1896.
522 Burlington St. (Medical Hall).

MARTIN JOSEPH WADE, LL. B., 1886, Iowa.

Professor of Medical Jurisprudence in the Medical Department, and Lec-
turer on Evidence in the Law Department. N. Clinton St.

**WILLIAM HARPER DEFORD, B. A., 1880, W. Maryland Coll.; D. D.
S., 1882, Baltimore; M. A., 1883, W. Maryland Coll.; M. D.,
1883, Baltimore.**

Professor of Oral Pathology and Hygiene in the Dental Department, 1892.
Cedar Rapids, Ia. (Dental Hall).

GILBERT LOGAN HOUSER, B. S., 1891; M. S., 1892, Iowa.

Professor of Animal Morphology and Physiology, 1892.
422 Iowa Ave. (Science Hall, first floor).

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**BENJAMIN FRANKLIN SHAMBAUGH, Ph. B., 1892; M. A., 1893, Iowa;
Ph. D., 1895, Pennsylvania.**

Professor of Government and Administration, 1895.
104 Market St. (Central Bldg).

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1898.**

Professor of the English Language, 1897.
430 N. Clinton St. (6 South Hall).

**CHARLES MOORE ROBERTSON, B. S., 1885; M. A., 1888; M. D., 1888,
Iowa.**

Professor of Otology, Rhinology, and Laryngology in the Medical Department, 1896.
Davenport, Ia. (Medical Hall).

**WILLIAM ROBERT WHITEIS, B. S., 1892; M. D., 1895; M. S., 1895,
Iowa.**

Professor of Histology and Embryology, 1898.
425 Iowa Ave. (Histological Lab).

HARRY SANGER RICHARDS, Ph. B., 1892, Iowa; LL. B., 1895, Harvard.

Professor of Law, 1893. * 19 E. Market. (Central Bldg).

**LEE WALLACE DEAN, B. S., 1894; M. S., 1896; M. D., 1896, Iowa.
Acting Professor of Physiology, 1898.**

So. Clinton St. (Medical Hall).

ELMER ALMY WILCOX, B. A., 1891, Brown.

Professor of Law, 1899. 414 Brown St. (12 Central Bldg).

CLARK FISHER ANSLEY, B. A., 1890, Nebraska.

Professor of English, 1899. 725 N. Linn St. (6 South Hall).

**FREDERICK BECKER, M. D., 1875, Hom. Med. Coll. of Missouri;
M. D., 1882, Coll. Phys. and Sur., St. Louis.**

Professor of Theory and Practice of Medicine in the Homœopathic Medical Department, 1899. Clermont, Ia. (H. M. Hospital).

LEONA ANGELINE CALL, B. A., 1880; M. A., 1883, Iowa.

Assistant Professor in charge of Greek Language and Literature, 1885.
21 N. Dubuque St. (Close Hall, second floor).

CHARLES SCOTT MAGOWAN, C. E., 1884; M. A., 1887, Iowa.

Assistant Professor of Civil Engineering, 1885.
304 Summit St. (South Hall, first floor).

BOHUMIL SHIMEK, C. E., 1883, Iowa.

Assistant Professor of Botany, and Curator of the Herbarium, 1895.

HENRY FREDERICK WICKHAM, M. S., 1894, Iowa.

Assistant Professor of Zoology, and Assistant Curator of the Museum of Natural History, 1891. 911 Iowa Ave. (Science Hall, third floor).

ARTHUR G. SMITH, Ph. B., 1891; M. A., 1895, Iowa.

Assistant Professor of Mathematics, 1893.
422 N. Dubuque St. (West Bldg., second floor).

FRANKLIN HAZEN POTTER, B. A., 1892; M. A., 1895, Colgate.

Assistant Professor of Latin, 1895. 314 Davenport St. (7 Central Bldg).

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Assistant Professor of Philosophy, 1897. 526 N. Linn St. (Psychological Lab).

ALDEN ARTHUR KNIPE, M. D., 1896, Pennsylvania.

Director of Physical Culture, 1900. (22½ S. Clinton St.)

GERSHOM HYDE HILL, B. A. 1871; Iowa Coll.; M. D., 1874, Rush Medical; M. A., 1881, Iowa Coll.

Lecturer on Insanity, 1890. Independence, Ia.

GIFFORD SIMEON ROBINSON, LL. D.

Lecturer on Appellate Practice and Agency.

HORACE EMERSON DEEMER, LL. B., 1879, Iowa.

Lecturer on Guaranty and Suretyship, and the Conducting of Law Business, 1899.

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Lecturer on Orthodontia and Dental Technic, 1899.
1027 College St. (Dental Hall).

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Lecturer in Hygiene in the Medical Department, 1899. Fairfield, Ia.

JOHN BLAIR KESSLER, M. D., 1877, Iowa,

Lecturer in Dermatology in the Medical Department, 1899.
Corner Clinton and Washington Streets.

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Instructor in Elocution, 1899.

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Instructor in German, 1892. 14 S. Governor St. (5 South Hall).

BERTHA GILCHRIST RIDGWAY,

Librarian, 1898. 4 Jefferson St. (Library).

ERNEST ALBERT ROGERS, D. D. S., 1892, Iowa.

Demonstrator of Dental Technology, and Lecturer on Dental Anatomy, 1892. 114 S. Linn St. (1 Dental Hall).

CHARLES HENRY BOWMAN, Ph. B., 1895; M. S., 1899, Iowa.

Instructor in Physics, 1895. 215 Reynolds St. (Phys. Lab).

HERBERT C. DOBCAS, Ph. B., 1895, Iowa.

Instructor in Pedagogy, 1895. 427 Reynolds St. (Psych. Lab., second floor).

CHARLES BALL LEWIS, D. D. S., 1896; M. D., 1899, Iowa.

Demonstrator in the Dental Department, 1896. 114 S. Linn St. (Dental Hall).

FRANK BOYNTON JAMES, D. D. S., 1897, Iowa.

Demonstrator in the Dental Department, 1895. 121 Iowa Ave. (Dental Hall).

WILLIAM EDWARD BARLOW, M. A., 1899, Cambridge, Eng.

Demonstrator of Chemistry, 1892. Fairchild St. (Chem. Lab).

WILBER JOHN TEETERS, B. S., 1893, Mt. Vernon Coll.; Ph. C., 1895, Michigan; M. S., 1898, Mt. Union Coll.

Demonstrator of Chemistry, 1895. 222 Reynolds St. (Chem. Lab).

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- LOUISE ELIZABETH HUGHES, PH. B., 1878; M. A., 1881; B. A., 1899,
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Instructor in Latin, 1896. 122 N. Capitol St. (Close Hall).
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Johns Hopkins.
Instructor in History, 1898. 526 N. Linn St. (10 South Hall).
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Instructor in French, 1898. 218 S. Linn St. (Close Hall).
- WILLIAM ROLLA PATTERSON, B. D., 1888; B. S., 1889, Iowa State
Normal; PH. B., 1895, Iowa; PH. D., 1898, Pennsylvania.
Instructor in Statistics and Economics, 1898.
505 Washington St. (4 Central Bldg).
- CLARENCE WILLIS EASTMAN, B. S., Worcester Polytechnic; M. A.,
PH. D., 1898, Leipzig.
Instructor in German, 1898. 430 N. Clinton St. (Close Hall).
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Hopkins.
Instructor in English, 1899. 313 Washington St. (South Hall).
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1899, Goettingen.
Instructor in Chemistry, 1899. 220 S. Johnson St. (Chem. Lab).
- JOHN VAN ETTEN WESTFALL, B. S., 1895, Cornell Univ.; PH. D.,
1898, Leipzig.
Instructor in Mathematics, 1899. 218 S. Linn St. (West Bldg).
- AUGUST VON ENDE, B. S., 1897, Iowa.
Instructor in Mathematics, 1899. 220 S. Johnson St. (West Bldg).
- JOHN T. McCLINTOCK, B. A., 1894, Parsons Coll.; M. D., 1898, Ia.
Demonstrator of Anatomy, Pathology, and Bacteriology in the Medical
Department, 1898. 411 S. Dubuque St. (Medical Hall).
- ASHLEY B. PALMER, D. D. S., Iowa.
Demonstrator in Porcelain Work in the Dental Department, 1899.
- SARAH DELIA HUTCHINSON, PH. B., 1883; M. A., 1888, Iowa.
Instructor in French, 1899. 310 Jefferson St. (7 Central Bldg).
- FREDERICK SOPHUS HOLSTEEN, PH. B., 1898, Iowa.
Instructor in Military Science and Tactics, 1898.
119 N. Capitol St. (West Bldg).
- FRANCIS NEWTON BRINK, B. PH., 1899, Iowa.
Assistant in Chemistry, 1898. 222 N. Dubuque St. (Chem. Lab).
- ROBERT BURNS HALDANE BEGG, B. S., Va. Poly. Inst.
Instructor in Civil Engineering, 1899.
424 E. Jefferson St. (South Hall, first floor).
- JOHN J. LAMBERT, B. DI., 1896; M. DI., 1897, Iowa State Normal;
B. PH., 1899, Iowa.
Instructor in Animal Morphology and Physiology, 1898.
119 N. Capitol St. (Science Hall).

THEODORE LINCOLN HAZARD, M. D., 1883, Michigan.

Assistant in Materia Medica in the Homœopathic Medical Department, 1892.
12 N. Clinton St. (Hom. Hospital).

CHARLES GRANT PARK, PH. G., 1898, Iowa.

Assistant in the Pharmacy Laboratory, 1899.
918 N. Dubuque St. (Pharm. Lab).

ZADA MARY COOPER, PH. G., 1897, Iowa.

Assistant in the Pharmacy Laboratory. 422 S. Dubuque St. (Pharm. Lab).

LEORA JOHNSON, M. D., 1890, Iowa.

Clinical Assistant to the Chair of Surgery, Homœopathic Medical Department, 1890.
12 N. Clinton St. (Hom. Hospital).

ALPHEUS L. POLLARD, M. D., 1893, Iowa.

Assistant to the Chair of Obstetrics in the Homœopathic Medical Department, 1898.
229 Summit St. (Hom. Hospital).

BESSIE G. PARKER, PH. B., 1898, Iowa.

Assistant in the Library, 1898. 14 Burlington St. (Library).

JENNIE I. FENTON,

Assistant in the Library. 4 Jefferson St. (Library).

RAYMOND E. PECK, M. D., 1897, Iowa.

Assistant to Chair of Surgery, 1899. Davenport, Ia.

BENJAMIN RICHARD JOHNSTON, M. D., Hering Coll., Chicago.

Assistant to Chair of Theory and Practice.

SAM BERKLEY SLOAN, B. A., 1899, Nebraska.

Assistant in English, 1899. 15 Harrison St.

MABEL C. WILLIAMS, PH. B., 1899.

Assistant in Philosophy, 1899.

PAUL G. EILERS, M. D., 1900, Iowa.

Home Surgeon, Homœopathic Hospital, 1900.

MARY A. RAFF,

Matron of the Homœopathic Hospital.

FLORENCE E. BROWN, PH. B., 1892, Iowa.

Matron of the Medical Hospital.

JOHN R. GARDNER, M. D., 1899, Iowa.

Home Surgeon, Medical Hospital.

LEE P. SIEG,

Assistant in the Physical Laboratory, 1899.

LECTURES.

Convocation Addresses.

1899.

Sept. 13.—President MacLean.

Dec. 14.—Death of Washington. Address by the Very Reverend Charles Stubbs, Dean of Ely.

1900.

Jan. 4.—Address by President George A. Gates, Iowa College. "Demands of this Age Upon the Schools of Higher Learning."

Feb. 22.—Washington's Birthday. Address by Chancellor William Bayard Craig, of Drake University. "Providential Men." Members of the Legislature in attendance.

Auspices of Y. M. and Y. W. O. A.

Vesper Services.

1899.

Oct. 29.—Dean Harry Pratt Judson, of Chicago University. "Some Necessary Conflicts."

Dec. 10.—President MacLean. "The Gospel of Manhood."

1900.

Jan. 21.—President H. H. Seerley, State Normal School. "The Requirements of Leadership."

Mar. 4.—President W. M. Beardshear, Iowa State College. "Ministry of Spirits."

Mar. 18.—Prof. Graham Taylor, Chicago. "Social Chivalry."

Auspices of Erodelphian Society.

Miss Jane Addams, of Hull House, Chicago.

Jan. 24.—The Present Day Attitude Toward Social Problems.

Jan. 25.—Charitable Relations.

Jan. 26.—Educational Methods.

Jan. 29.—Industrial Relations.

Jan. 30.—Ffilial Relations.

Jan. 31.—Contemporary Efforts at Social Control Through the Agency of Government.

Auspices of Tabard, Polygon and Ivy Lane Societies.

Jan. 22.—Elbert Hubbard. "Origin and Growth of the Roycroft Community of Workers."

General.

Feb. 7.—Dr. Frank Russell. "Moki Snake Dance."

THE UNIVERSITY.

The State University of Iowa is an integral part of the public school system of the state. As required by law, it begins, as far as practicable, where the high schools end, and seeks to complete the work carried through the various grades below it. A sense of this vital connection with the system of public schools determines, in a large measure, its requirements for admission, its spirit and the trend of its work.

The control of the University is entrusted to a Board of Regents, consisting of the Governor of the State and the Superintendent of Public Instruction, *ex-officio*, and one member, elected by the General Assembly, from each Congressional District.

ORGANIZATION OF THE UNIVERSITY.

The University comprises the following departments:

1. COLLEGIATE DEPARTMENT, including graduate work.
2. LAW DEPARTMENT.
3. MEDICAL DEPARTMENT.
4. HOMOEOPATHIC MEDICAL DEPARTMENT.
5. DENTAL DEPARTMENT.
6. DEPARTMENT OF PHARMACY.
7. HOSPITALS.

Graduate work is given by the Collegiate Department leading to the Degrees of Master of Arts, Master of Science and Doctor of Philosophy.

For the degrees of Bachelor of Arts, Bachelor of Science and Bachelor of Philosophy there are four general courses of study—one Classical, two Philosophical, and one general Scientific. There are also two technical courses leading to the degree of Civil Engineer and Electrical Engineer.

A summer session of the Collegiate Department has been organized to give to teachers in the public schools of the State an opportunity to carry on University work, and also to assist students who may wish to supplement the regular course of study.

COLLEGIATE DEPARTMENT.

FACULTY AND INSTRUCTORS.

- GEORGE EDWIN MACLEAN, LL. D.,**
President.
- AMOS NOYES CURRIER, A. M., LL. D.,**
Professor of Latin Language and Literature, and Dean of the Faculty.
- SAMUEL CALVIN, A. M., PH. D.,**
Professor of Geology.
- THOMAS HUSTON MACBRIDE, A. M., PH. D.,**
Professor of Botany.
- LAUNCELOT WINCHESTER ANDREWS, PH. D.,**
Professor of Chemistry.
- GEORGE THOMAS WHITE PATRICK, PH. D.,**
Professor of Philosophy.
- CHARLES BUNDY WILSON, A. M.,**
Professor of German Language and Literature, and Secretary of the Faculty.
- ANDREW ANDERSON VEBLEN, A. M.,**
Professor of Physics.
- LAENAS GIFFORD WELD, A. M.,**
Professor of Mathematics.
- CHARLES CLEVELAND NUTTING, A. M.,**
Professor of Zoology
- ISAAC ALTHAUS LOOS, A. M., D. C. L.,**
Professor of Political Science.
- JOSEPH JASPER MCCONNELL, A. M.,**
Professor of Pedagogy.
- WILLIAM CRAIG WILCOX, A. M.,**
Professor of History.
- FREDERIC C. L. VAN STEENDEREN, A. M.,**
Professor of French Language and Literature.
- ALFRED VARLEY SIMS, C. E.,**
Professor of Civil Engineering.
- GILBERT LOGAN HOUSER, M. S.,**
Professor of Animal Morphology and Physiology.

BENJAMIN FRANKLIN SHAMBAUGH, A. M., Ph. D.,

Professor of Government and Administration.

WILLIAM PETERS REEVES, Ph. D.,

Professor of the English Language.

CLARK FISHER ANSLEY, B. A.,

Professor of English.

LEONA ANGELINE CALL, A. M.,

Assistant Professor in charge of Greek Language and Literature.

CHARLES SCOTT MAGOWAN, A. M., C. E.,

Assistant Professor of Civil Engineering.

BOHUMIL SHIMEK, C. E.,

Assistant Professor of Botany, and Curator of the Herbarium.

HENRY F. WICKHAM, M. S.,

Assistant Professor of Zoology.

ARTHUR G. SMITH, A. M.,

Assistant Professor of Mathematics.

FRANKLIN HAZEN POTTER, A. M.,

Assistant Professor of Latin.

CARL E. SEASHORE, Ph. D.,

Assistant Professor of Philosophy.

ALDEN ARTHUR KNIPE, M. D.,

Director of Physical Culture.

PAULINE KIMBALL PARTRIDGE,

Instructor in Elocution.

FREDERIC BERNARD STURM, A. B.,

Instructor in German.

CHARLES HENRY BOWMAN, Ph. B.,

Instructor in Physics.

HERBERT C. DORCAS, Ph. B.,

Instructor in Pedagogy.

LOUISE ELIZABETH HUGHES, A. M.,

Instructor in Latin.

PERCY LEWIS KAYE, A. M., Ph. D.,

Instructor in History.

WILLIAM O. FAENSWORTH, A. M.,

Instructor in French.

WILLIAM ROLLA PATTERSON, Ph. D.,

Instructor in Statistics and Economics.

CLARENCE WILLIS EASTMAN, Ph. D.,

Instructor in German.

NATHANIEL E. GRIFFIN, Ph. D.,

Instructor in English.

- CARL VON ENDE, PH. D.,**
Instructor in Chemistry.
- JOHN VAN ETTEN WESTFALL, PH. D.,**
Instructor in Mathematics.
- AUGUST VON ENDE, B. S.,**
Instructor in Mathematics.
- JOHN J. LAMBERT, PH. B.,**
Instructor in Animal Morphology and Physiology.
- FREDERICK S. HOLSTEEN, PH. B.,**
Instructor in Military Science and Tactics.
- SARAH DELIA HUTCHINSON, PH. B., A. M.,**
Instructor in French.
- FRANK N. BRINK, PH. B.,**
Assistant in Chemistry.
- ROBERT BURNS HALDANE BEGG, B. S.,**
Instructor in Civil Engineering.
- SAMUEL BERKELEY SLOAN, B. A.,**
Assistant in English.
- MABEL C. WILLIAMS, PH. B.,**
Assistant in Philosophy.
- LEE P. SIEG,**
Assistant in the Physical Laboratory.

STANDING COMMITTEES OF THE COLLEGIATE FACULTY.

- Executive:** The President, and Professors Weld and Currier.
- Admission and Classification:** Professors Weld, Wilson, McConnell, Patrick and Currier.
- Preparatory Schools:** Professors McConnell, Loos, Calvin and Houser.
- Catalogue:** Professors Reeves, Shambaugh and Macbride.
- Military:** Professors Andrews, Weld and McConnell.
- Athletics:** Professors Sims, Shambaugh and Loos.
- Library:** The President, and Professors Calvin, Nutting, Patrick and Loos.
- Rules:** Professors Veblen, Calvin and Van Steenderen.
- Summer Session:** Professors McConnell, Andrews, Wilson, Weld and Loos.

GENERAL PLAN.

THE Collegiate Department offers four general courses of study,—one Classical, two Philosophical, and one General Scientific; and two technical courses,—Civil Engineering and Electrical Engineering, whose requirements and lines of work offered are set forth under Courses of Study.

Students are not allowed to change their elected course without permission of the Faculty, nor to take less or more than fifteen hours of lectures or recitations per week, except as required by the program of their course.

The President, Dean, and members of the Faculty are glad to advise with students as to courses and the choice and grouping of elective studies.

Persons over twenty-one years of age, not candidates for a degree, may be admitted to special studies, without examination, at the discretion of the Faculty, on the recommendation of the professors in charge of the subjects chosen by such students.

Resident Graduates.—Graduates of this University and of other Colleges and Universities in good standing, are admitted without examination, whether candidates for advanced degrees or not, on application to the President or Dean. Graduate courses are set forth under the proper heading.

REQUIREMENTS FOR ADMISSION.

GENERAL.

CANDIDATES for admission to the Freshman Class in any of the Collegiate courses must be at least sixteen years of age, and must, by examination or by presenting acceptable certificates, furnish evidence of having completed the preparatory requirements.

No one will be admitted whose deficiencies exceed the equivalent of four credits; a *preparatory* credit is the equivalent of one study daily for a term of twelve weeks, on the basis of three studies a day in the preparatory schools. Candidates having deficiencies not exceeding this limit may be admitted *upon condition that they complete their preparation within the first year after admission.*

It is expected that the following work will be completed in the grammar school: Practical Arithmetic, Reading, Penmanship, Orthography, English Grammar, Geography, Book-keeping (single entry), Physiology, (the statutory requirements for primary and grammar schools), United States History (three term's work), Civil Government (one term's work), Composition (three term's work), Drawing (three term's work).

The work in Book-keeping, Composition, Drawing, and Civil Government is not to be considered as absolutely required, but only work in excess of the amount named in this paragraph will receive credit as preparatory work.

Requirements for admission common to all courses:

Mathematics	9 Credits
English	5 Credits
History	4 Credits

NUMBER OF CREDITS REQUIRED FOR ADMISSION.

CLASSICAL COURSE.

Latin, see page 20	12 Credits
Greek, see page 21	8 Credits
Mathematics, see page 21	9 Credits
English, see page 22	5 Credits

History, may include civics, see page 23	4 Credits
Electives, see page 23	3 Credits

Total, 36 Credits

A credit is one-third of the work of one term of twelve weeks five hours per week.

PHILOSOPHICAL COURSE A.

Latin, see page 20	12 Credits
Mathematics, see page 21	9 Credits
English, see page 22	5 Credits
History, may include civics, see page 23	4 Credits
Electives, see page 24	6 Credits

Total, 36 Credits

PHILOSOPHICAL COURSE B. ENGINEERING AND SCIENTIFIC COURSES.

One foreign language, see page 24	6 Credits
Mathematics, see page 21	9 Credits
English, see page 22	5 Credits
History, may include civics, see page 23	4 Credits
Electives, see page 23	12 Credits

Total, 36 Credits

The electives presented for admission to these courses may be

- (a) Additional work in foreign languages, to complete the entire requirement.
- (b) Additional work in English of approved character.
- (c) Additional work in history of approved character.
- (d) Science and miscellaneous studies in order preferred.

(1) Physics, not less than 2 terms.	(6) Economics, not less than 1 term.
(2) Botany, " " 1½ "	(7) Chemistry, " " 2 terms.
(3) Physiology, " " 1½ "	(8) Astronomy, " " 1 term.
(4) Phys. Geog., not less than 1½ terms.	(9) Zoology, " " 2 terms.
(5) Drawing and Bookkeeping not less than 1½ terms.	(10) Geology, " " 1 term.

DETAILED STATEMENT OF REQUIREMENTS FOR ADMISSION.

CLASSICAL COURSE.

GROUP I.—ANCIENT LANGUAGES.

1. Latin. Grammar, Cæsar (four books), Cicero (six orations), Vergil (six books) with Prosody.

Instead of the prescribed Cæsar an equivalent amount of Viri Romæ or Nepos will be accepted and is recommended to the preparatory schools. In this case the remainder of the require-

ments may be offered in Cæsar or Cicero. It is expected that three or four of the six required orations of Cicero (the Catiline orations being taken as the standard of length) will be read thoroughly and the remainder rapidly with a view to securing facility in translation. Equivalents in kind will be accepted for any part of the specified requirements. *An accurate and ready knowledge of grammatical forms and construction and a good vocabulary are of essential importance.* Slight reading should be taught and practiced from the first.

Exercise in writing Latin, based upon the current reading, ought to be carried through the *entire preparatory course*. An amount equivalent to Collar, Part III, is required for admission.

Four years of daily recitation are needed for the required preparation.

The Roman pronunciation is used in the University.

2. Greek. Grammar, Xenophon's Anabasis. As few high schools meet this requirement, the University for the present will provide means for fulfilling it, and an equivalent of three terms' work from Group IV may be offered, but collegiate credit shall not be granted for work thus made up.

The preparatory work in Greek should give thorough knowledge of grammatical forms, familiarity with the common rules of syntax and the ability to write simple Greek prose with correct accents. It is not expected that high school pupils under ordinary circumstances will be able, in a single year, to cover thoroughly the work required for admission.

GROUP II.—MATHEMATICS.

3. Algebra. The Algebra of the high school should comprise a careful study of the following topics: signs and symbols; fundamental operations; factoring (including lowest common multiple and highest common divisor); fractions; simple and quadratic equations; theory of exponents (including negative and fractional exponents and radicals); progressions. Especial attention should be given to such salient points as the significance of the minus sign, factoring, theory of exponents, equations, and the formal statement of algebraic problems. The interpretation of algebraic results with their graphical representation should be introduced at the earliest possible stage and constantly insisted upon.

4. Geometry. Both plane and solid geometry are required. The "heuristic" method in beginning the study of geometry is strongly recommended (See Hopkins' Manual of Plane Geometry, D. C. Heath & Co., and Spencer's Inventional Geometry, D.

Appleton & Co.); also Campbell's *Observational Geometry*, Harper & Brothers.

Whatever method is used the pupil should be provided with adequate drawing instruments and should construct and verify all of his propositions and theorems. Geometric processes and results should be expressed by algebraic symbols whenever possible. Original investigations should not simply be encouraged, but should be insisted upon as a matter of course. The eminently practical side of the study of geometry should not be lost sight of, but the work should be so arranged that it may be of the highest disciplinary value. The language of all geometrical exercises should be exact.

Arithmetic. The work in arithmetic should in general be completed in the grammar grades. At least one term's work in arithmetic may be done with great profit in the high school after the completion of the required work in algebra and geometry. Not only will a general review of the subject be found beneficial in itself, but the higher point of view now attainable may be taken advantage of in many ways which it is not necessary to enumerate.

In the high school not less than one-third of the time for three years should be devoted to the work in algebra and geometry. It is desirable that the high school work in mathematics be not finished until the end of the course, in order that there may be no break in the continuity of the work between the high school and the University.

GROUP III.—ENGLISH AND HISTORY.

5. *English Composition.* All applicants for admission, whether from accepted schools or not, will be examined to test their knowledge of English grammar and their ability to write clearly and correctly. No applicant will be accepted who is deficient in these matters.

The teacher is reminded that proper preparation for this part of the requirement includes constant practice in writing, with careful correction and revision of themes. A part of the time should be devoted to the study of some good text-book in composition, such as *Lewis's First Book in Writing* (Macmillan) or *Scott & Denney's Composition-Rhetoric* (Allyn & Bacon).

6. *English Literature.* Throughout the high school course much attention should be paid to the study of literature, by which is meant not merely the study of a manual on the history of literature but a careful, sympathetic study of literature itself in the writings of representative authors. Entire masterpieces

suited to the attainments of the class should form the basis of recitations, and, in addition, collateral reading should be assigned and written reports required.

During the last year of the course a good outline history of the literature should be used, such as Brooke's Primer of English Literature (The Macmillan Co.) or Pancoast's Introduction to English Literature (Holt & Co.). This should always, however, be subordinated to the study of texts themselves. In the study of literature the student should be stimulated and trained not merely to read and enjoy but to analyze the style and to absorb the spirit and substance of an author.

7. **History.** At least four terms' work should be presented in history. The course of study and available text-books should be somewhat as follows: first and second terms, History of Greece (Oman, Smith, Cox or Myers) and Rome (Allen, Leighton, Smith or Myers); third term, History of England (Montgomery or Gardiner); fourth term, The History of the United States (Channing, Thomas, Fiske, Johnson, Montgomery or McMaster) or Civil Government (Fiske's Civil Government or Andrews's Manual of the Constitution).

Instead of the first three terms' work in history indicated above, which is preferred, the University will accept for the present three terms' work in general history from one of the following text-books: Myers, Fisher, Freeman or Swinton.

GROUP IV.—ELECTIVE.

Three terms' work, and if Greek is not offered six terms' work, are to be selected in science or in a modern language.

8. **Science.** The subjects are arranged in the order of preference: physics, botany, physical geography, physiology, drawing or bookkeeping, economics, chemistry, astronomy, zoology, geology.

Credit for entrance will not be allowed on these subjects for less than two terms in each, except that one, or one and one-half terms, may be allowed in botany, physiology, physical geography and drawing or book-keeping, and one term in astronomy, geology and economics. In no case should more than two sciences be taken up for consecutive study in a single year; and whenever possible three terms of consecutive work in one science are advised, especially in physics.

9. **German.** A full year in German may be indicated by Joynes-Melssner's German Grammar, Parts I and III, about fifty pages selected from Joynes's German Reader (D. C. Heath & Co.), all of Storm's Immensee (Henry Holt & Co.) and Riehl's Burg Neideck (Ginn & Co.).

10. French. Van Daell's Introduction to the French Language or Edgren's French Grammar, and Van Daell's Introduction to French Authors or Super's French Reader will be accepted as an equivalent of a year's work in French.

PHILOSOPHICAL COURSE A.

The requirements for admission to this course are the same as for the Classical Course, except that three terms' work from Group IV may be substituted for Greek.

PHILOSOPHICAL B, SCIENTIFIC, AND ENGINEERING COURSES.

Preparation in all respects the same as that offered for the Classical Course will be accepted for the Philosophical B, Scientific, and Engineering Courses.

In place, however, of the fifteen terms' work in ancient languages required for admission to the Classical Course, candidates for admission to the courses above named may offer as substitute six terms' work in foreign language and nine terms' work in science. The requirements in foreign language may be satisfied by (1) two years in Latin; (2) two years in German; or (3) two years in French; but not by a single year in each of two languages, nor by fractions of years in different languages though the time spent in foreign language study may amount to two years in the aggregate.

Two years in foreign language is a minimum language requirement for admission to these courses; but nine terms of foreign language work and six terms of science, or fifteen terms of foreign language work alone, will be acceptable substitutes for the fifteen terms of ancient languages required for admission to the Classical Course; provided that not less than two years have been given to some one language, and not less than one year to each additional language that may be offered.

Work in science may be selected from the subjects named in Group IV, section 8. When the maximum amount of nine terms is to be offered candidates are advised, if it be practicable, to spend one year on physics, and one half year on each of four subjects selected from the following list: botany, physical geography (Davis), physiology, drawing, and book-keeping, although work in astronomy, geology, economics, zoology or chemistry will be received as indicated in Group IV, section 8.

Candidates are advised to present additional work in English or history or both, rather than to present the maximum of nine

terms' work in Science. Work in these branches, however, must be of unquestioned secondary character.

Excepting the ancient languages, as above noted, all other requirements for admission to the Classical Course must be fully met by candidates for admission to the Philosophical B, Scientific and Engineering Courses.

GENERAL OBSERVATIONS.

1. It is strongly advised that preparatory work be confined to few subjects and that they be so chosen that they form two or three groups of closely related subjects.

2. It is assumed that, under ordinary circumstances, four years in the high school will be devoted to meet the requirements for admission here prescribed.

3. Students who are admitted with conditions can make them up in the Iowa City Academy or under the direction of a private tutor approved by the Faculty.

ADMISSION BY EXAMINATION.

All students not presenting certificates from accredited high schools will be examined in the various subjects required for admission before being scheduled as students in the University.

Students presenting certificates from accredited high schools for work not fully meeting the requirements for admission will be examined upon those subjects in which they are deficient.

All applicants for admission, whether from accredited high schools or not, will be examined to test their ability to use clear and correct English.

ADMISSION BY CERTIFICATES FROM ACCREDITED HIGH SCHOOLS.

The Board of Regents has adopted the following plan for the examination of high school pupils and for general high school inspection:

1. Any school may be placed upon the accredited list upon application of its principal or board of directors, provided the Collegiate Faculty of the University is satisfied as to its (a) course of study, (b) methods of teaching, (c) facilities for instruction.

2. The course of study of such schools must be adapted to fitting its graduates for one or more of the collegiate courses of the University, or it must be in the direct line of such preparation.

3. Whenever any accredited or other school requests it, its pupils may be examined by the University at a convenient time in any subject or subjects selected by the school authorities from the schedules of studies required for admission to the University, and each pupil will receive from the University a credit card for each subject passed.

4. The University shall provide for schools desiring the same, a syllabus of each of the subjects in which examination is to be taken.

5. All accredited schools shall be inspected at the pleasure of the University, the expense of the inspection to be borne by the University.

6. The authorities of accredited schools should report annually to the University all changes made in the course of study and submit a list of names of the instructors employed in the high school with subjects taught by each.

The following revised rules governing the accrediting of schools have been adopted by the Collegiate Faculty, and are now in force. The attention of the authorities of accredited schools is called to the revised rules in order that they may make such changes in their courses of study and in their plans of work as will enable them fully to conform to the rules.

RULES GOVERNING THE ACCREDITING OF HIGH SCHOOLS.

High schools meeting the following conditions may, at the option of the Collegiate Faculty, be accredited as making full preparation for one or more of the University courses; and graduates of such schools will be admitted to the University without being subject to any examination except that in English required of all entering students:

1. The course of study should be not less than four years of thirty-six weeks each in length, following an elementary course not less than eight years in length.

2. The course of study should require of each pupil not more than four recitations daily.

3. The entire time of at least two teachers should be given to instruction in high school branches.

4. The quality of the instruction given and the character of the text-books used should be approved by the Faculty.

5. Schools seeking considerable credit in science should demonstrate their ability to do successful laboratory work.

6. Schools seeking considerable credit in history and English should give evidence of a special library equipment for these branches.

Private academies, seminaries, normal schools or other secondary schools meeting the conditions mentioned above, or their equivalent, may be accepted on the same basis as high schools.

ACCREDITED SCHOOLS.

All candidates for admission to the Freshman class, who come from accredited schools, must furnish to the University certificates containing *specific statements as to the amount of work done in each study*. Blank certificates will be furnished upon application to the President, and should be returned by September 1st.

There are doubtless other schools which are entitled to places on one or other of these lists, but because they have not furnished the data necessary to enable the University authorities to come to a safe conclusion in regard to their proper places in the lists, or because they have not signified a desire to come into accredited relations with the University, they are for the present omitted, without prejudice. Students presenting themselves from secondary schools, not included in the list of accredited schools, will be admitted only upon examination.

The following schools have been accredited by the Collegiate Faculty of the University as making full preparation for one or more of the courses of the Collegiate Department.

HIGH SCHOOL.	PRINCIPAL.	SUPERINTENDENT.
Ackley,	Supt. acts,	O. W. Maxwell.
Adel,	Supt. acts,	S. A. Potts.
Albia,	Maicy Schreiner,	H. C. Hollingsworth.
Algona,	Minnie Coate,	N. Spencer.
Ames,	Mrs. C. C. Smith,	E. D. Y. Culbertson.
Anamosa,	Lillian B. Joseph,	A. Palmer.
Atlantic,	C. M. Cole,	William Wilcox.
Bedford,	Ethelyn Miller,	E. H. Griffin.
Boone,	Alice Bradrick,	Geo. I. Miller.
Britt,	Mary Morton,	A. M. Deyoe.
Brooklyn,	Jennie M. Hartwell,	Eugene Heneley.
Burlington,	Maurice Ricker,	F. M. Fultz.
Carroll,	Chas. E. Blodgett,	C. C. Magee.
Cedar Falls,	Grace I. Norton,	O. J. Laylander.
Cedar Rapids,	Abbie S. Abbott,	J. T. Merrill.
Centerville,	Janet Wilson,	F. E. King.
Charles City,	Anna L. Wolfe,	G. S. Dick.
Cherokee,	Rodney M. Arey,	A. V. Storm.
Clarinda,	C. E. Arnold.	G. W. Fisher.

HIGH SCHOOL.	PRINCIPAL.	SUPERINTENDENT.
Clarion,	Supt. acts,	S. T. May.
Clinton,	E. L. Mason,	O. P. Bostwick.
Columbus Junction,	Supt. acts,	J. W. Thompson.
Council Bluffs,	W. N. Clifford,	H. B. Hayden.
Corning,	Supt. acts,	D. M. Kelly.
Creston,	Wm. Bell,	O. E. French.
Cresco,	Mary Alda Tate,	L. E. A. Ling.
Davenport,	W. D. Wells,	J. B. Young.
Decorah,	Supt. acts,	E. A. Parks.
Denison,	G. R. Davies,	H. V. Failor.
Des Moines, E.,	E. H. White,	Amos Hiatt.
Des Moines, N.,	Arthur W. Brett,	F. A. Lacey.
Des Moines, W.,	W. O. Riddell,	S. H. Sheakley.
Dubuque,	F. L. Smart,	F. T. Oldt.
Eagle Grove,	Mae Brewer,	J. G. Grundy.
Eldora,	Katherine Walters,	W. A. Doren.
Emmetsburg,	F. E. Tellier,	H. E. Blackmar.
Estherville,	Inez Myers,	C. C. Stover.
Fairfield,	S. G. Quigley,	J. E. Williamson.
Forest City,	Elma L. Dickinson,	H. O. Bateman.
Fort Dodge,	H. H. Roberts,	F. C. Wildes.
Fort Madison,	W. L. Barrett,	C. W. Cruikshank.
Geneseo, Ill.,	G. A. Ketcham,	A. W. Hussey.
Glenwood,	Lilla C. Hurlbut,	Jessie G. Nutting.
Greene,	Kate McDonald,	J. R. Jamison.
Greenfield,	Cora Smith,	W. H. Reever.
Grinnell,	Mrs. L. E. Wilson,	D. A. Thornburg.
Guthrie Center,	Supt. acts,	Adam Pickett.
Guthrie County,	F. E. Lenosker,	
Hamburg,	H. T. Mitchell,	J. C. King.
Hampton,	Lenna Prater,	G. A. Bateman.
Harlan,	Alice Sudlow,	E. S. White.
Ida Grove,	E. T. Sheppard,	T. B. Hutton.
Independence,	Clara M. Travis,	J. L. Buechele.
Iowa City,	F. C. Ensign,	S. K. Stevenson.
Iowa Falls,	Mrs. A. L. Burdick,	L. Hezzelwood.
Jefferson,	Mrs. E. B. Wilson,	L. B. Carlisle.
Keokuk,	Geo. Edw. Marshall,	O. W. Weyer.
Knoxville,	H. E. Simpson,	Harlan Updegraff.
Lamoni,	Supt. acts,	Geo. N. Briggs.
LeMars,	Supt. acts,	E. N. Coleman.
Leon,	Supt. acts,	S. L. Darrah.
Lyons,	J. R. Bowman,	O. H. Brainerd.
Manchester,	Supt. acts,	R. W. Wood.

COLLEGIATE DEPARTMENT.

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HIGH SCHOOL.	PRINCIPAL.	SUPERINTENDENT.
Maquoketa,	Supt. acts,	C. C. Dudley.
Marengo,	Supt. acts,	C. H. Carson.
Marion,	Lizzie R. Marshall,	J. J. Dofflemeyer.
Marshalltown,	J. S. McCowan,	F. E. Willard.
Mason City,	Supt. acts,	A. R. Sale.
McGregor,	Josephine V. Harrison	.
Missouri Valley,	Emma C. DeGross,	A. B. Warner.
Moline, Ill.,		H. M. Slauson.
Montezuma,	Ida J. McKee,	S. C. Dickinson.
Mt. Ayr,	Supt. acts,	L. H. Maus.
Muscatine,	E. F. Schall,	F. M. Witter.
Nevada,	Anna Batman,	H. G. Lamson.
New Hampton,	Henrietta M. Holmes	F. D. Merritt.
Newton,	Supt. acts,	E. J. H. Beard.
Onawa,	Supt. acts,	Albert F. Steyer.
Osage,	George Sawyer,	George Chandler.
Osceola.	Alice Dilley,	I. N. Beard.
Oskaloosa,	O. E. Dixon,	S. J. Finley.
Ottumwa,	Eugene Pierce,	A. W. Stuart.
Parkersburg,	Ida F. Seydig,	W. F. Barr.
Perry,	Edith McGee,	L. A. Blezek.
Red Oak,	E. U. Graff,	W. F. Chevalier.
Reinbeck,	Supt. acts,	J. J. Moser.
Rockford.	Supt. acts,	J. C. Sanders.
Rock Rapids,	Antonie J. Stober,	W. S. Wilson.
Sanborn,	Fannie Mowry,	J. J. Billingsly.
Sheldon,	Nellie Jones,	W. I. Simpson.
Shenandoah,	Lizzie Marley,	O. E. Smith.
Sibley,	Supt. acts,	W. P. Johnson.
Sigourney,	Florence R. Marshall	John F. Riggs.
Sioux City,	W. A. Turnbull,	H. E. Kratz.
Spencer,	H. C. Richardson,	F. E. Trigg.
St. Mary's, Ia. City,	Sister M. Aloysius,	A. J. Schultz.
Storm Lake,	Clara R. Bamber,	J. H. O. Donoghue.
Stuart,	F. W. Lambert,	G. W. Bryan.
Taylorville Tp.,	Taylorville, Ill.,	W. E. Andrews.
Tipton,	Clara A. Boss,	R. B. Crone.
Traer,	Supt. acts,	O. M. Elliott.
Villisca,	Supt. acts,	F. E. Palmer.
Vinton,	Lester B. Parsons,	F. H. Bloodgood.
Washington,	Lydia M. Thomer,	G. H. Mullin.
Waterloo, E.,	Lydia Hinman,	F. J. Sessions.
Waterloo, W.,	Amy Boggs,	A. T. Hukill.

THE STATE UNIVERSITY OF IOWA.

HIGH SCHOOL.	PRINCIPAL.	SUPERINTENDENT.
Waukon,	Supt. acts,	J. F. Smith.
Waverly,	Kate E. Sullivan,	A. W. Merrill.
Webster City,	Wilber Sparks,	L. H. Ford.
West Liberty,	Mary L. Phelps,	L. T. Hill.
Williamsburg,	Supt. acts,	Bruce Francis.
?		
OTHER SCHOOLS.	PRINCIPAL OR PRESIDENT.	
Cedar Valley Seminary, Osage,	Alonzo Abernethy.	
Charles City College,	J. F. Hirsch.	
Decorah Institute,	Mrs. J. Breckenridge.	
Denison Normal School,	W. C. Van Ness.	
Dexter Normal College,	{ D. P. Repass.	
	{ A. G. Smith.	
Epworth Seminary,	Frank G. Barnes.	
Howe's Academy, Mt. Pleasant,	S. C. Howe.	
Iowa City Academy,	W. A. Willis.	
Michigan Military Academy, Orchard Lake, Mich.,	J. S. Rogers.	
Sac City Institute,	G. W. Lee.	
St. Mary's High School,		
Urbana-Shrader Academy, Urbana,	Mrs. J. S. Wilson.	
Washington Academy,	C. M. Grumbling.	
Whittier College,	W. N. Halsey.	
Wilton German-English College,	J. F. Grove.	
Woodbine Normal School,	{ M. A. Reed.	
	{ H. A. Kinney.	

The work done in the schools named below is regarded as of sufficient merit to entitle them to recognition by the University.

In the cases of some of these schools sufficient work is done, of the quality required, to entitle their students to enter the University with the conditions allowed to be made up after entrance. In other cases the work done is of such a character that it can be received so far as it meets the requirement of the University. In some cases applications have been made to be placed upon the accredited list but action on these applications has been deferred until these schools can be inspected by a representative of the University.

Properly certified work from these schools will be received for the present so far as this work meets the preparatory requirements of the University.

HIGH SCHOOL.	PRINCIPAL.
Adair,	C. T. Wright.
Allerton,	J. F. Holiday.
Anita,	W. J. Cattell.
Audubon,	F. P. Hocker.
Avoca,	C. Ray Aurner.
Belle Plaine,	F. B. Lawrence.
Bloomfield,	Will Fortune.
Brighton,	Samuel Quigley.
Capital Park, Des Moines,	Z. C. Thornburg.
Chariton,	D. R. Michener.
Charter Oak,	C. F. Garrett.
Clearfield,	H. S. Ash.
Clear Lake,	D. H. Campbell.
Colfax,	J. L. Mishler.
Correctionville,	T. B. Morris.
Corydon,	Charles Carter.
DeWitt,	Margaret Buchanan.
Dysart,	H. O. Pratt.
Eldon,	E. C. Mills.
Elkader,	J. E. Webb.
Exira,	J. L. Conger.
Fayette,	F. E. Finch.
Fonda,	D. E. Barnes.
Fontanelle,	C. Colfax Smith.
Garner,	M. F. Moine.
Glidden,	J. H. Beveridge.
Grundy Center,	J. E. Stout.
Holstein,	E. P. Bettenga.
Hubbard,	W. O. Reed.
Humboldt,	R. E. Towle.
Keosauqua,	David Williams.
Kingsley,	C. E. Hanchett.
Lake Mills,	O. O. Vogenitz.
Lime Springs,	D. L. Grangis.
Manning,	J. J. McMahon.
Mapleton,	H. H. Hahn.
Mechanicsville,	Clarence McCracken.
Milton,	F. E. Buck.
Monticello,	C. R. Scroggie.
Morning Sun,	A. M. M. Dornon.
Moulton,	W. L. Cochrane.
Mt. Pleasant,	F. W. Else.
Nashua,	C. J. Trumbauer.

HIGH SCHOOL.	PRINCIPAL.
Neola,	J. M. Rapp.
New Sharon,	J. W. Graham.
North English,	E. H. McMillan.
Northwood,	E. M. Mitchell.
Oak Park, Des Moines,	J. A. Goodrich.
Odebolt,	C. H. Kamphoefner.
Oelwein,	L. B. Moffett.
Orange City,	O. W. Herr.
Pella,	Willard H. Lyon.
Riceville,	Paul M. Ray.
Richland,	W. C. Pidgeon.
Rolfe,	A. T. Rutledge.
Sac City,	J. N. Hamilton.
Shelby,	Chas. R. Garrett.
Shell Rock,	C. E. Buckley.
Sioux Rapids,	P. L. Dorland.
Springdale,	S. B. Stonerook, Jr.
Springville,	J. E. Vance.
State Center.	J. E. Clayton.
Tabor,	Wm. E. Kline.
Tama City,	C. J. Brower.
Victor,	W. H. Whitford.
Wapello,	J. W. Cradler.
West Union,	Grant E. Finch.
Wilton,	L. G. Focht.
Winfield,	R. M. Hanson.
Calhoun County Normal School,	D. K. Bond.
Hawarden Normal School,	C. H. Brake.
Nora Springs Seminary,	H. A. Dwelle.
St. Ansgar Seminary,	Sigard Olsen.

ADVANCED STANDING.

Students from approved colleges bringing certificates of work and standing will be admitted without examination. In determining their position in the University, however, the value of the work done will be measured by the University standards.

Students coming from colleges whose requirements for admission are substantially those of the University will be admitted ordinarily to equal rank, provided they enter not later than the beginning of the Senior year. In every instance at least one year's work in residence must be completed in the Collegiate

Department of the University. The assignment of studies shall be at the discretion of the Faculty.

Graduates of the four years' course of the Iowa State Normal School will be admitted to Junior standing without examination, and will be required to spend two years at the University before receiving a degree. Graduates of the three years' course will be admitted to Sophomore standing and will be required to spend three years in residence.

UNDERGRADUATE COURSES.

CLASSICAL COURSE.

Freshman Year.	FALL.	WINTER.	SPRING.
	Hours a week.	Hours a week.	Hours a week.
Greek	5	5	5
Latin	4	4	4
English	2	2	2
Mathematics	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History.....	2	2	2
Military Drill.....	3	1	3
Sophomore Year.			
French or German.....	5	5	5
English	2	2	2
Elective	8	8	8
Military Drill.....	3	1	3
Junior Year.			
Elective	15	15	15
Military Drill.....	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill.....	3	1	3

CONDITION:—Three terms of material science must be taken in this course.

PHILOSOPHICAL COURSE A.

Freshman Year.	FALL.	WINTER.	SPRING.
	Hours a week.	Hours a week.	Hours a week.
German or French.....	5	5	5
Latin	4	4	4
English	2	2	2

	FALL.	WINTER.	SPRING.
	Hours a week.	Hours a week.	Hours a week.
Mathematics	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History.....	2	2	2
Military Drill.....	3	1	3
Sophomore Year.			
French or German	3	3	3
Latin, German or French....	5	5	5
English	2	2	2
Elective	5	5	5
Military Drill.....	3	1	3
Junior Year.			
Philosophy	2 or 3	2 or 3	2 or 3
Elective	12 or 13	12 or 13	12 or 13
Military Drill.....	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill.....	3	1	3

CONDITION:—Three terms of material science must be taken in this course.

PHILOSOPHICAL COURSE B.

Freshman Year.	FALL.	WINTER.	SPRING.
	Hours a week.	Hours a week.	Hours a week.
German	5	5	5
Latin or French.....	5	5	5
English	2	2	2
Mathematics	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History.....	2	2	2
Military Drill.....	3	1	3
Sophomore Year.			
German	3	3	3
English	2	2	2
Latin or French.....	5	5	5

	FALL.	WINTER.	SPRING.
	Hours a week.	Hours a week.	Hours a week.
Elective	5	5	5
Military Drill.....	3	1	3
Junior Year.			
Elective	15	15	15
Military Drill.....	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill.....	3	1	3

CONDITION:—Three terms of material science must be taken in this course. In the Junior and Senior years a *major*, the equivalent of not less than three hours extending through two years, and a kindred *minor* of not less than three hours extending through one year, must be taken. Each student may select his own major, but in the selection of his minor he must seek the advice of the professor in charge of the major, or of a committee of the Faculty. *Students entering this course on the terms prescribed for admission to the Scientific Course, but without the full Latin requirements for entrance to Philosophical Course A, must complete them after entrance, and the University will temporarily provide for instruction in Cicero's Orations, and Vergil.* This provision is made solely in the interest of considerable numbers of high school graduates whose course has not furnished the opportunity for fulfilling these requirements.

GENERAL SCIENTIFIC COURSE.

Freshman Year.	FALL.	WINTER.	SPRING.
	Hours a week	Hours a week.	Hours a week.
German or French.....	5	5	5
Mathematics	5	5	5
English	2	2	2
Drawing	3	3	3
Military Drill.....	3	1	3
Sophomore Year.			
German or French.....	5 or 3	5 or 3	5 or 3
English	2	2	2
Physics	5	5	5
Botany, Zoology, Morphology, Geology, Chemistry, Mathe- matics, or Astronomy.....	5	5	5
Military Drill.....	3	1	3

Junior Year.	FALL.	WINTER.	SPRING.
	Hours a week.	Hours a week.	Hours a week.
German or French.....	3 or 5	3 or 5	3 or 5
Chemistry	5	5	5
Botany, Zoology, Morphology or Geology.....	5	5	5
Elective	3 or 5	3 or 5	3 or 5
Military Drill.....	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill.....	3	1	3

No substitution whatever is allowed for any of the required work of the Scientific Course, except that, in place of the full requirement in either one of the modern languages, there may be offered an equivalent amount of Latin of *collegiate grade*.

SPECIAL COURSES IN SCIENCE.

The student who wishes, in his undergraduate course, to specialize in some particular line of scientific study, should at the beginning of the Sophomore year choose from the group of alternate electives then open to him (Botany, Zoology, Morphology, Geology, Chemistry, Mathematics and Astronomy) that subject most directly connected with the branch to which he wishes to give special attention. He will thus be able to pursue his chosen study without interruption through three years of his course, the last year of which may, if he so choose, be devoted entirely to his specialty.

Such extreme specialization is not recommended to undergraduate students, it being the opinion of the Collegiate Faculty that a better preparation for a scientific career will be afforded by a broader and more liberal course of study. However, those wishing to specialize in any branch of science are urged to confer freely with the professors with whom they expect to pursue such study.

Unless excused by the Faculty, each student pursuing a special course in science will be required in his Senior year to prepare a thesis upon some subject approved by the professor in charge of his specialty, such thesis to represent an amount of work entitling the writer to at least two credits.

COMBINED SCIENTIFIC AND MEDICAL COURSE.

1. Students who pursue the General Scientific Course and complete not less than two years of biologic science, and in the third year choose as one elective anatomy and dissection in the Medical Department, and in the fourth year two electives in the

Medical Department, of which anatomy and physiology shall be one, may receive credit for the first two years of the regular course in Medicine, provided also that such students complete at least two electives in the Collegiate Department in the spring terms of the fifth and sixth years.

2. Students who at the outset declare their intention of pursuing a combined Collegiate and Medical Course, may in the General Scientific Course offer instead of German, two years' work in Latin.

3. The degree of B. S. shall be conferred in June of the sixth year.

COURSE IN CIVIL ENGINEERING.

FRESHMAN YEAR.

Fall Term.—French or German, * 5. ** Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3.

Winter Term.—French or German, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 1.

Spring Term.—French or German, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3.

SOPHOMORE YEAR.

Fall Term.—German or English, * 3. Mathematics, 5. Surveying, 5. Physics, 5. Military Drill, 3.

Winter Term.—German or English, 3. Mathematics, 5. Descriptive Geometry, 2. Mapping, 3. Physics, 5. Military Drill, 1.

Spring Term.—German or English, 3. Mathematics, 5. Descriptive Geometry, 2. Topographical Surveying, 3. Physics, 5. Military Drill, 3.

JUNIOR YEAR.

Fall Term.—Electricity and Magnetism, 5. Analytical Mechanics, 2. Applied Mechanics, 3. Graphical Statics, 3. Chemistry, 5. Military Drill, 3.

Winter Term.—Dynamo and Motor, 3. Chemistry, 5. Analytical Mechanics, 2. Applied Mechanics, 3. Graphical Statics, 3. Theory of Stresses, 3. Military Drill, 1.

Spring Term.—Thermodynamics, 3. Hydraulics, 5. Graphical Statics, 4. Theory of Stresses, 5. Military Drill, 3.

SENIOR YEAR.

Fall Term.—Railroad Curves, 3. Steam Engine, 2. Sanitary Engineering, 2. Structural Designing, 4. Geology, 2. Civil Engineering, 4. Military Drill, 3.

*NOTE—See Courses of Instruction in Civil Engineering for requirement in language.

**NOTE—The numerals mean hours a week.

Winter Term.—Resistance of Materials, 2. Limes and Cements, 2. Sanitary Engineering, 2. Structural Designing, 3. Laboratory, 2. Geology, 2. Civil Engineering, 3. Military Drill, 1.

Spring Term.—Water Supply Engineering, 3. Specifications and Contracts, 3. Geology, 2. Civil Engineering, 3. Laboratory, 2. Structural Designing, 3. Thesis. Military Drill, 3.

COURSE IN ELECTRICAL ENGINEERING.

FRESHMAN YEAR.

Fall Term.—French or German, * 5. ** Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3.

Winter Term.—German or French, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 1.

Spring Term.—German or French, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3.

SOPHOMORE YEAR.

Fall Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 3.

Winter Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 1.

Spring Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 3.

JUNIOR YEAR.

Fall Term.—Physics: lectures, 1, laboratory, 4. Chemistry, 5. Analytical Mechanics, 3. Applied Mechanics, 2. Shop-work, 2. Military Drill, 3.

Winter Term.—Physics: lectures, 1, laboratory, 4. Chemistry, 5. Analytical Mechanics, 2. Applied Mechanics, 3. Shop-work, 2. Military Drill, 1.

Spring Term.—Direct Current Dynamo, 3. Physical Laboratory, 2. Chemistry, 5. Differential Equations, 3. Heat and Thermodynamics, 2. Shop-work, 2. Military Drill, 3.

SENIOR YEAR.

Fall Term.—Theory of Electricity, Photometry; Electrical Laboratory, 10. Draughting, 3. Steam Engine, 2. Military Drill, 3.

Winter Term.—Alternate Current Machinery, Electrical Laboratory, 10. Draughting, 3. Strength of Materials, 2. Military Drill, 1.

*NOTE—See Courses of Instruction in Civil Engineering for requirement in language.

**NOTE—The numerals mean hours a week.

Spring Term.—Distribution and Transmission of Electricity, Telegraph and Telephone, Electrical Laboratory, 10. Electrochemistry, 5. Military Drill, 3.

NOTE.—One year of German and one of French are required. Either may be taken during the Freshman year, to be succeeded by the other in the Sophomore year. Electrochemistry, being given only during even-numbered years, will alternate with the Junior spring term Chemistry.

BACCALAUREATE DEGREES.

For each of the courses of study leading to a bachelor's degree four years' work is required.

On completion of the regular courses, or of the special courses approved by the Faculty, the following degrees are conferred:

BACHELOR OF ARTS upon those who complete the Classical Course.

BACHELOR OF PHILOSOPHY upon those who complete the Philosophical Course.

BACHELOR OF SCIENCE upon those who complete the General Scientific Course, or either of the Engineering Courses, or a special course in science which has previously been approved by the Faculty.

See Combined Scientific and Medical Course.

The degree of **BACHELOR OF DIDACTICS** is conferred upon *graduates* in the regular courses who have completed the required work in pedagogy and can show proof of two years' successful teaching after graduation.

SPECIAL CERTIFICATES IN GERMAN AND FRENCH.

Special Certificates as to scholarship in German or in French will be granted under the authority of the Collegiate Faculty on the following conditions:

1. They shall be issued to students of this University on or after graduation only.

2. They shall be in the nature of an authorized guaranty as to scholarship in German or in French.

3. They shall be issued only after *at least* three years of full work (to represent *five* hours of lectures and recitations a week or an equivalent) in one of these subjects.

4. Candidates must pass a final examination in the subject in which the certificate is desired.

5. The examination must be conducted by the professor in charge of the subject, assisted by such other instructors as may be agreed upon by him and the President of the University.

6. These certificates will be signed by the President and by the professor immediately concerned.

COURSES OF INSTRUCTION.

LATIN LANGUAGE AND LITERATURE.

PROFESSOR CURRIER; ASSISTANT PROFESSOR POTTER,
MISS HUGHES.

1. **Cicero. Selected Orations.** Miss HUGHES.
Throughout the year. Tuesday, Wednesday, Thursday, Friday.

2. **Vergil. Aeneid with a course in mythology throughout the year,** Tu., Wed., Th., Fri. Miss HUGHES.

Courses 1 and 2 are for students in course Philosophical B as indicated on page 36.

3. **Livy, Cicero, Vergil and Terence.** Fall: Livy, Selections from Books I, XXI and XXII. Winter: Cicero's De Senectute or De Amicitia and Selected Letters, with outline of Roman Literature. Spring: Terence's Phormio and Vergil's Georgics II or IV. Grammar, writing Latin and sight reading during the year. Those who show marked proficiency in writing Latin during the fall term are allowed an option of easy Latin, Cicero and Aulus Gellius, to be read under the direction of the instructor during the winter and spring terms. Assistant Professor POTTER and Miss HUGHES.

Throughout the year, Mon., Tu., Wed., Th., at 10, 11 and 1:30.

4. **Cicero and Horace.** Fall: Cicero's Tusculan Disputations. Winter and spring: Horace's Odes, Satires and Epistles. This course is mainly occupied with the literary side of the authors studied. Professor CURRIER.

Throughout the year, Mon., Wed., Fri., at 9.

5. **Pliny and Tacitus.** Selected Letters of Pliny. Tacitus' Germania and Agricola. This course is principally literary and historical. As much attention is given to the Latinity of the Silver Age as is needful for the understanding and appreciation of the authors. Assistant Professor POTTER.

Throughout the year, Tu., Th., at 9.

6. **Cicero, Quintilian, and Tacitus.** Fall: Cicero's De Oratore. Winter: Quintilian, Books X and XII. Spring: Tacitus'

De Oratoribus. Particular attention will be paid to literary criticism as exemplified in these authors. Professor CURRIER.

Throughout the year, Tu., Th., at 8.

7. **Tacitus and Seneca.** Fall and winter: Tacitus, selections from the *Annals* and *Histories*. Spring: Seneca's *Morals and Letters*. Professor CURRIER.

Throughout the year, Tu., Th., at 8.

Courses 6 and 7 are given in alternate years.

8. **Plautus.** Three plays. The treatment is mainly literary with due attention to metres and ante-classical forms and constructions. Assistant Professor POTTER.

Fall term, three hours a week.

9. **Cicero's Letters.** Advanced course. Assistant Professor POTTER.

Fall term, three hours a week.

Courses 8 and 9 are given in alternate years.

10. **Lucretius and Catullus.** Assistant Professor POTTER.

Winter term, three hours a week.

11. **Seneca. Tragedies.** Assistant Professor POTTER.

Winter term, three hours a week.

Courses 10 and 11 are given in alternate years.

12. **Tibullus and Propertius.** Assistant Professor POTTER.

Spring term, three hours a week.

13. **Juvenal and Martial.** Assistant Professor POTTER.

Spring term, three hours a week.

Courses 12 and 13 are given in alternate years.

14. **Seminary in Caesar, Cicero, and Vergil.** This is intended to meet the needs of prospective Latin teachers and others who wish to gain some familiarity with the methods of original research. The fall term is devoted to syntactical and historical studies covering *Cæsar's Gallic War* (seven books). The work of the winter term is mainly historical, and deals with Cicero's career as an orator; one half of the term is devoted to a study of the conspiracy of Catiline which is based largely on Sallust. Vergil's *Aeneid* complete is studied in the spring term mainly on the literary side. Prerequisite, Course 9. Assistant Professor POTTER.

15. **History of Roman Literature.** The reading by the class of suitable selections will be supplemented by informal lectures on the history of the literature. Fall, Early Latin metrical inscriptions and poetry; winter, Lucilius and the Menippean satirists Varro, Petronius, Seneca; spring, Late Latin; Apuleius' *Cupid and Psyche*, selections from Suetonius and the Christian

Hymns. Prerequisite, Course 8 or 9. Assistant Professor **POTTER**.

Throughout the year two hours a week.

Courses 14 and 15 are given in alternate years.

16. Latin Syntax. Introduction to the study of historical syntax. Prerequisite 14 or 15. Assistant Professor **POTTER**.

Throughout the year one hour a week.

17. Roman Antiquities. A systematic study of private life and of legal and political Antiquities. Professor **CURRIER**.

Throughout the year two hours a week at 2:30.

18. Seminary in Archaeology. For 1901 the subject will be the Topography and Archæology of Rome and the vicinity. Professor **CURRIER**.

19. Cicero, Livy, and Ovid. Sight reading of suitable selections. Professor **CURRIER**.

Throughout the year one hour a week.

Courses 6 and 7 are open to students who have completed Courses 3 and 4 or 5 and must precede the other courses offered. Course 18 is intended for graduate students, and Courses 6—19 are open to them.

GREEK LANGUAGE AND LITERATURE.

ASSISTANT PROFESSOR **CALL**.

For the present a course in Goodwin's Greek Grammar, White's First Greek Book and Xenophon's Anabasis will be given to students who enter without the required preparation in Greek.

Throughout the year, daily at 11.

1. Xenophon, Lysias and Homer. Fall: Xenophon's Anabasis with written exercises based on the text read, and review of grammar. Winter: select orations of Lysias, social customs and political institutions. Spring: Homer's Iliad with study of Homeric times and the history of character of Greek epic poetry.

Throughout the year, daily at 10.

2. Herodotus, Plato and Demosthenes. Fall: selections from Herodotus. Winter: Plato's Apology with sight reading from Xenophon's Memorabilia. Spring: Demosthenes' Oration on the Crown.

Throughout the year, Mon., Wed., Fri., at 9.

3. Greek Tragedy. Fall: Aeschylus' Prometheus Bound. Winter: Sophocles' Antigone. Spring: Euripides' Alcestis. With this course are required supplementary readings from other tragedies and reports on the origin, literary form, and representation of Greek tragedy.

Throughout the year, Mon., Wed., Fri., at 8.

4. Late Greek. Fall: New Testament. Winter: Plutarch's Pericles. Spring: Lucian's Dialogues. Homer's Odyssey may be substituted for Plutarch.

Throughout the year, Tu., Th., at 9.

Course 1 is required of students in the Classical Course. Courses 2, 3 and 4 are open to students who have completed Course 1.

GERMAN LANGUAGE AND LITERATURE.

PROFESSOR WILSON; MR. STURM, DR. EASTMAN.

In the instruction in the German language the first year is spent in laying a broad foundation for the future work. At the beginning of the second year it is expected that the students will be able to read the literature with some degree of appreciation, and from this time on the ability to understand and to appreciate the great masterpieces of German literature is the main object in view; at the same time, however, the origin and history of words, and the relation that the German language bears to the English tongue are studied and explained. But the courses are, as a whole, literary rather than strictly philological or linguistic. Sight-translation, translating at hearing, writing from dictation, and conversation as means to a proper *Sprachgefuehl*, form a part of the work.

Course 1 represents from four to six terms of ordinary high school work. Courses 1, 2, 3, and 4 are Freshman, Sophomore, Junior and Senior respectively, and must be taken in the order of the numerals. Courses 5, 6, 7, and 8 are advanced courses and may be taken in accordance with the regulations given below in the statement of each course. All the courses in German run through the entire collegiate year and are offered every year.

1 Grammar and Reading. Thomas's Practical German Grammar with constant practice in writing German, Storm's Immensee, Baumbach's Nicotiana, and Heyse's L'Arrabbiata. Six sections. Mr. STURM, and Dr. EASTMAN.

Throughout the year, daily.

2. Freytag, Lessing, Goethe, and Schiller. Fall: Freytag's Die Journalisten, or Lessing's Minna von Barnhelm, with a review of the grammar. Winter: Goethe's Hermann und Dorothea, or Egmont, and composition. Spring: Schiller's Jungfrau von Orleans, and composition. Four sections. Professor WILSON, Mr. STURM, and Dr. EASTMAN.

Throughout the year, Mon., Wed., Fri.

3. German Authors of the Nineteenth Century, and German Lyrics. Fall: Scheffel's Ekkehard, and readings in German on

the literature of the nineteenth century. Winter: Heine's Prose, and readings from Heine's Poetry by the instructor. Spring: Buchheim's Deutsche Lyrik, and lectures on German verse with special reference to the lyric poets studied. The work of this term is intended to give a general idea of the historical development of the German lyric from the sixteenth century to the present. Professor WILSON.

Throughout the year, Mon., Wed., Fri., at 11.

4. Goethe, Lessing, and History of German Literature. Fall: Goethe's Faust, Part 1, with an outline of Part II. Winter: Lessing's Nathan der Weise. Spring: The History of German Literature. This term's work gives a general view of the development of German literature from the earliest times to the nineteenth century, special attention being paid to the two classic periods of the twelfth and eighteenth centuries. Francke's Social Forces in German Literature is used as a text-book, which is supplemented by reports on assigned reading. Professor WILSON.

Throughout the year, Tu., Th., at 11.

5. German Seminary. For the study and discussion of the works of special periods or of special movements. The Faust Books, Marlowe's Faustus, Goethe's Faust, and the Romantic School are some of the subjects that have been studied. This course is primarily for graduate and advanced students. Admission by personal application. When the majority of applicants so elect, this work may be made a course in Advanced German Composition. Professor WILSON.

Throughout the year, Tu., Th., at 9.

6. Middle High German. This course is primarily for graduate and advanced students, especially those who expect to teach German, and candidates for admission to it must have completed at least three courses in German. Applicants should consult the instructor. Paul's Mittelhochdeutsche Grammatik and Bachmann's Mittelhochdeutsches Lesebuch. Professor WILSON.

Throughout the year, Tu., Th., at 10.

7. Old High German. Primarily for graduates. Prerequisites: In addition to the equivalent of courses 1, 2, and 3 in German, at least one of the following courses, German 4, 5, 6, 8, English 11. Braune's Althochdeutsche Grammatik and Althochdeutsches Lesebuch. Students intending to take this course should consult the instructor before scheduling. Dr. EASTMAN.

Throughout the year, two hours a week; time to be arranged.

8. The German Romantic Movement, with special reference to its social and literary aspects. As this is an advanced course,

applicants should consult the instructor before scheduling. Mr. STURM.

Throughout the year, two hours a week; time to be arranged.

Special Certificates of scholarship in German are granted on or after graduation on conditions set forth on page 40. The *minimum* amount of work required for such a certificate is represented by Courses 1, 2, and 3, and two chosen from 4, 5, 6, 7, and 8.

FRENCH LANGUAGE AND LITERATURE.

PROFESSOR VAN STEENDEREN; MR. FARNSWORTH,
MISS HUTCHINSON.

1. **Essentials of French Grammar.** A course in French grammar, with copious reading and composition.

Five sections, Professor VAN STEENDEREN, Mr. FARNSWORTH, Miss HUTCHINSON.

Throughout the year, daily.

2. **French Novelists of the XIXth Century.** Alfred de Vigny, Victor Hugo, Alfred de Musset, Prosper Merimee, Dumas the Elder, Honore de Balzac, Alphonse Daudet, Guy de Maupassant, Francois Coppee, Plerre Loti.

This course aims to impart ability to read modern French prose, to present the important features of modern French fiction and incidentally to aid in the development of the student's critical appreciation of literary art. To these ends translation into English is, whenever possible, cautiously and gradually abandoned towards the end of the course, while numerous talks and lectures in French as well as in English will illustrate the reading and explain literary movements.

Two sections. Professor VAN STEENDEREN, Mr. FARNSWORTH. Throughout the year, Mon., Wed., Fri.

3. **Composition, Syntax and Historical Grammar.** A course in the principles of the French language, aiming to impart a fair ability in writing French for practical purposes on the basis of grammatical understanding. This course is required of all who wish to take the courses that follow. It may be taken with Course 4, but preferably with Course 2. Professor VAN STEENDEREN,

Throughout the year, Tu., Th.

4. **History of French Literature.** A general survey of French Literature from the ninth to the twentieth century, with specimens from every period. This course is given in English and is of considerable general interest. It may be taken instead of Course 2. Professor VAN STEENDEREN.

Throughout the year, Mon., Wed.

5. **French Drama.** Mysteries, Miracles, Moralities, Farces, "Soties;" Adam de la Halle, Rutebeuf, Gringoire, Jodelle, Garnier, Hardy, Rotrou, Corneille, Racine, Moliere, La Motte, Lesage, Marivaux, Voltaire, Piron, Beaumarchais, Victor Hugo, Dumas the Elder, Alfred de Vigny, Alfred de Musset, Scribe, Augier, Dumas the Younger, Sardou, Palleron, and others.

Text-books and lectures. The subject is presented from the standpoint of historical sequence and organic development. This course is given in French. Professor VAN STEENDEREN.

Throughout the year, Tu., Th.

*6. **French Lyrica.** Selections ranging from the XIVth century to the present time. Text-books, reports and lectures. This course is given in French. Professor VAN STEENDEREN.

Throughout the year, Fri.

*7. **Old French.** A course in the reading of Old French verse and prose. Texts and lectures. Professor VAN STEENDEREN.

Throughout the year, Tu., Th.

*8. **Seminary in French Romanticism.** This course comprises the study of the nature of classicism and of the social relations and influences pertaining to the movement.

Throughout the year, two hours a week.

SPANISH LANGUAGE.

1. **Essentials of Spanish Grammar.** A course in Spanish grammar, with copious reading and composition. Professor VAN STEENDEREN.

Throughout the year, Mon., Wed., Fri.

ENGLISH.

PROFESSOR ANSLEY; PROFESSOR REEVES, DR. GRIFFIN, MR. SLOAN.

The organization of the following courses has in view the study of English as a means of expression, the study of the literature, and the study of the historical development of the language.

The first and most important of these divisions, the rhetorical, undertakes to enlarge and strengthen the student's own power of expression. Constant writing is required in the Freshman year, and the criticism, both oral and written, is directed to individual needs. Every effort is made to enable the student to develop a clear, forcible and sensible style.

In the study of English as literature, a general survey from Old English times to the present is first required of all Sopho-

*Primarily advanced students. Admission on personal application.

mores. After this course has been completed, the student may elect more special work. The ideals are, to attain sound principles of criticism, and to assist students in gaining an appreciation of the best English writers and their art.

The study of the language itself is closely connected with both the rhetorical and the literary study of English. The characteristic changes in phonology, spelling, accidence, syntax, and vocabulary are studied historically, and representative texts in Old English, Middle English, and Early Modern English are read in class.

The graduate work in English, while presupposing a knowledge of the principal courses in the Collegiate Department, may be arranged to the needs of the student and thus permit him to offer one or more electives in studying for an advanced degree. The seminary subjects for 1900-1901 will be English Poetry and The Theory of Literary Criticism.

Candidates for all baccalaureate degrees are required to complete two years' work in English in classes meeting two hours a week. Freshmen will take Course 1, and Sophomores, Course 4. Law students wishing to take work in English will find Courses 1, 3 and 18 especially helpful.

Unless by special arrangement at the beginning, credit in any course is given only upon satisfactory completion of that course. Courses 2, 3, 4, 6, 10, 11, 16, 17, 18 and 19 continue through the year. Courses 7, 12 and 14 begin and end with the fall term. Course 8 begins and ends with the winter term. Courses 5 and 9 begin and end with the spring term. Courses 13 and 15 begin with the winter term and end with the close of the spring term. One division of Course 1 begins with the winter term and completes the work with the close of the following fall term. The other divisions of Course 1 begin with the fall term and continue through the year.

(1) COMPOSITION AND RHETORIC.

1. **Constructive Rhetoric.** Practice in the construction of effective English prose, with observation of the principles involved. Lectures, criticism of written exercises, and studies in the work of representative modern writers. Required of all Freshmen. Mr. SLOAN.

Throughout the year, two hours a week.

2. **Advanced Composition.** A course in narrative and descriptive prose. Some study of the art of modern fiction is included, with practice in the short story form. Admission, by consent of the instructor. Professor ANSLEY.

Throughout the year, two hours a week.

3. Argumentative Composition and Debate. A study of the principles of argumentation, with constant practice in their applications in written and oral debate. Open to students who have credit for Course 1. Mr. SLOAN.

Throughout the year, two hours a week.

(2) LITERATURE.

4. English Literature. A general survey of English literature from the earliest times. Required of all Sophomores. Professor REEVES and Dr. GRIFFIN.

Throughout the year, two hours a week.

5. Chaucer. A study in fourteenth century art. Open to those who have had the training of Course 4 in Chaucerian grammar and pronunciation. Lectures; Skeat's Student's Chaucer. Dr. GRIFFIN.

Spring term, two hours a week.

6. Shakespeare. Some elements of literary art exemplified in the plays of Shakespeare. Three representative tragedies are studied in detail. Open to all students who have completed Course 1. Professor ANSLEY.

Throughout the year, three hours a week.

7. English Prose of the Eighteenth Century. Lectures and written reports. This course deals with the representative prose writers of the period, including Swift, Addison, Steele, Defoe, Richardson, Fielding, Sterne, Johnson. The evolution of modern English prose receives special consideration. Dr. GRIFFIN.

Fall term, two hours a week.

8. English Poetry of the Eighteenth Century (Classical School). This course treats of the representative poets of the Classical School, including Dryden, Parnell, Prior, Gay, Pope. Dr. GRIFFIN.

Winter term, two hours a week.

9. English Poetry of the Eighteenth Century (Naturalistic School). Lectures and written reports. This course deals with the representative poets of the Naturalistic School, including Young, Thomson, Collins, Gray, Goldsmith. Special attention is given to the rise of English Romanticism. Dr. GRIFFIN.

Spring term, two hours a week.

10. Seminary in English Poetry. Special studies in the poetry of the nineteenth century. Students should provide themselves with complete texts of Wordsworth, Tennyson, Browning and Matthew Arnold. Professor REEVES.

Throughout the year, two hours a week.

11. Browning. A study of the work of Robert Browning, with especial reference to his philosophy of art and life. This

course should be preceded or accompanied by Course 6. Professor ANSLEY.

Throughout the year, two hours a week.

12. **English Popular Poetry.** Lectures and written reports. This course is devoted to a study of the origin and growth of English popular poetry, with special reference to the ballad. Percy's "Reliques of Ancient English Poetry" forms the basis of the study. Dr. GRIFFIN.

Fall term, three hours a week.

13. **Religious Motives in English Literature.** An historical study of the treatment of religious themes (1) in mediæval English literature, (2) in modern English literature. In (1), special attention is given to religious elements in the romance and in the drama. In (2), the devotional lyric is the object of special consideration. Dr. GRIFFIN.

Winter and spring terms, three hours a week.

14. **American Literature (Prose).** Lectures and written reports. This course deals with the representative prose writers of America, including Irving, Cooper, Poe, Hawthorne, Emerson, Lowell, Holmes. Dr. GRIFFIN.

Fall term, two hours a week.

15. **American Literature (Poetry).** Lectures and written reports. This course treats of the representative poets of America, including Poe, Bryant, Longfellow, Whittier, Lowell. Dr. GRIFFIN.

Winter and spring terms, two hours a week.

16. **The Theory of Literary Criticism.** A study of the bases of judgments and preferences in literature. Seminary. Admission by consent of the instructor. Professor ANSLEY.

Throughout the year, two hours a week.

(3) PHILOLOGY.

17. **Old English, Middle English, and the History of the English Language.** An introduction to the reading of Old and Middle English texts. Professor REEVES.

Throughout the year, five hours a week.

18. **Anglo-Saxon Law.** The text of King Alfred's Code will be read in class. Lectures, with reports on parallel reading. Professor REEVES.

Throughout the year, two hours a week.

19. **Gothic and Old Saxon.** Graduate course. Professor REEVES.

ELOCUTION.**MRS. PARTRIDGE.**

1. **Elementary Vocal Training.** Studies in phonics with reference to articulation, and the eradication of faults of speech or voice; development of breath control for artistic voice production; studies of the factors of speech, the timbre of the voice; stress as applied to tones, emphasis and accent, with selections adapted for illustration and analysis; studies in gesture; readings from standard authors.

This course is open to Collegiate Freshmen, and Junior Law students.

Throughout the year, two hours a week.

2. **Vocal Expression.** Elementary Principles of Vocal Expression; correct mental action in reading and speaking; studies and presentations from speeches and forms of the drama, to develop the powers of conception and the ability to express every phase of human experience as a means of securing simplicity and naturalness in all kinds of speaking. Lectures on problems in vocal expression. Study of monologues, impersonations, and miscellaneous selections, with individual criticism. This course is open to Sophomores who have completed Course 1.

Throughout the year, one hour a week. Each student receives in addition to class exercises a private rehearsal each week.

3. **Oratory.** Application of the principles of expression to the oratory of the bar; special exercises for the development of extemporaneous speaking; study of orations with the methods employed by leading orators; selections from Shakespeare's tragedies and comedies as one of the best means of studying human character, studies in gesture for developing self-control and spontaneity of action. This course is open to Senior Law students.

Fall and winter terms, two hours a week.

HISTORY.**PROFESSOR WILCOX; DR. KAYE.**

1. **History of Greece.** Text-book and lectures. This course is intended primarily for members of the Freshman class. **DR. KAYE.**

Fall term, two hours a week.

2. **History of the Roman Republic.** Text-book and lectures. This work is designed primarily for members of the Freshman class. **DR. KAYE.**

Winter term, two hours a week.

3. **History of the Roman Empire.** Text-book and lectures. This work is also designed primarily for members of the Freshman class. Dr. KAYE.

Spring term, two hours a week.

4. **History of Mediaeval Europe.** Text-book and lectures. This course is intended primarily for members of the Sophomore class and presupposes acquaintance with the History of Greece and Rome. The course is divided into three parts to correspond with the three terms of the university year. The first part, constituting the work of the fall term, extends from the final overthrow of the western Roman empire in 476 A. D. to the death of Charles the Great, 814 A. D. The work of the winter and spring terms traces the downfall of the Carolingian system and its gradual reconstruction into Modern Europe. Dr. KAYE.

Three terms, two hours a week.

5. **The Protestant Revolution in Europe.** Lectures and special assignments. This course will include a study of the general European situation at the close of the Mediæval period, analysis of the factors in the Protestant movement and a consideration of the results of the European upheaval as far down as the outbreak of the French Revolution. This course is not open to Freshmen. Dr. KAYE.

Three terms, two hours a week.

6. **Constitutional History of England.** Analyzes and lectures. This course is intended for members of the Junior and Senior classes only. As much previous work as possible in Ancient and Mediæval History should be taken before beginning Professor WILCOX.

Three terms, three hours a week.

7. **Constitutional History of the United States.** Lectures. This course is designed for Senior and graduate students. The course embraces, during the fall term, the study of the origin and development of the constitution of the United States from preceding political forms. The winter and spring terms finish the work with a study of the working of the United States Government under the constitution from 1789 to the present. Professor WILCOX.

Three terms, three hours a week.

8. **The French Revolution.** This course is designed for Senior and graduate students. Considerable work in Mediæval History is an indispensable prerequisite. Professor WILCOX.

Fall term, two hours a week.

9. **The Era of Napoleon in Europe.** This course, like Course 8, is designed for upper classmen and graduate students. Professor WILCOX.

Winter term, two hours a week.

10. **The Nineteenth Century in Europe.** This is a sequel to Courses 8 and 9, and is open to the same class of advanced students. Professor WILCOX.

Spring term, two hours a week.

11. **Seminary in English History.** This course is intended primarily for graduate students who are qualified to specialize in English History. Those Senior students who have had Course 4 and are capable of doing original and independent work will also be admitted to this Seminary. Professor WILCOX.

Three terms, two hours a week.

12. **Seminary in United States History.** This course is also primarily designed for graduate students, but exceptions are made similar to those specified for Course 9. Professor WILCOX.

Three terms, two hours a week.

All the courses in History, including the two Seminaries, are given each year. There are no alternating courses.

All courses in History are elective. Admission to the courses is conditioned only upon the qualifications of the candidate who desires to take them.

Students are advised to plan their historical work so that it will be logical in its order of sequence. Students who intend to emphasize historical work in college are urged to make careful preparation in History in preparatory schools.

In arranging the courses in History in the University, the attempt has been made to present the entire field of historical study with reference to logical and chronological sequence, so that no period shall be neglected and each period be treated in the light of what goes before and what comes after.

POLITICAL SCIENCE.

PROFESSOR LOOS; DR. PATTERSON.

The several subjects in charge of the professor of political science are here grouped under the following headings: (1) *Political Economy*, (2) *Sociology and Political Philosophy*. The courses of the first group are, in the main, Junior and Senior electives, while those of the second are open only to Seniors and graduate students. Exceptions to these rules may be made in individual cases by the special permission of the professor in charge.

All the courses under the first group, except 1 and 2, presuppose some knowledge of the general principles of political

economy as laid down in the manual by Mill or Walker. Students who are not thus prepared are required to take Course 2 as a preparation for the other courses in economics, except that Course 3 may be taken as beginning course by Junior or Senior collegiates and by professional students. Students who wish to specialize political economy are advised to take Courses 1 and 2 in their Sophomore year as a preparation for courses which follow. Candidates for admission to advanced courses should in all cases consult the professor in charge before scheduling.

POLITICAL ECONOMY.

1. **Economic History.** After an introductory study of primitive man and primitive civilization (Starr's First Steps in Human Progress) the course will occupy itself mainly with the development of trades and manufactures in Europe (Gibbon's Industry in England), and later with the industrial development of the United States (Wright's Industrial Revolution of the United States). Open to Sophomores. Dr. PATTERSON.

Fall term, Tu., Th., at 8.

2. **Economics.** An introduction to the leading principles of economic science. Designed for the general student and as a basis for more advanced studies in economics. Open to Sophomores and special students. Dr. PATTERSON.

Winter and spring terms, Tu., Th., at 8.

3. **Political Economy,** an advanced course. Lectures with assigned readings. Order of topics: the nature, scope, and fundamental concepts of economic science, the organization of industry and the theory of values, and practical problems in money and banking during the fall term; the distribution of wealth and the functions of government during the winter term. Open to Junior and Senior Collegiates and to professional students. Professor LOOS.

Fall and winter terms, Mon., Wed., Fri., at 11.

4. **Public Finance.** This course is designed as a continuation of Course 3 and will treat of public economy in respect to public expenditure, public income, public debts, and financial administration. The course is open to any student who has taken Course 2 or Course 3. Professor LOOS.

Spring term, Mon., Wed., Fri., at 11.

5. **Statistics.** Lectures and investigation. A study of population in Europe and America, grouped under the heads: structure of the population, numbers, density, races and nationalities, sex, age, conjugal condition, and occupation. Growth of population: natural increase; births, intensity; sexes, national-

ity; marriages, intensity, age, productivity; deaths, intensity, sex, age, causes, epidemics and suicides. Immigration and emigration. Population in its economic aspects, agriculture, mining, manufacturing, commerce, railroads, banks, money, prices, wages, consumption. Population in its social aspects, education, pauperism and crime.

Readings in the literature of the subject will be assigned, and special care taken to acquaint the student with the practical use of the principal governmental publications bearing on the subjects discussed. Dr. PATTERSON.

6. Debating Course. Selected topics in economics, politics, and sociology. Open only to students who have taken at least one course in one of these subjects. Two hours throughout two terms. Students may schedule for this course at the opening of the fall term and again at the opening of the winter term; those who begin the course in the fall term continue it through the winter term and those who begin it in the winter term must carry it through the spring term in order to receive credit. Professor Loos and Dr. PATTERSON.

Two terms, hours to be arranged.

7. Taxation. A study of the principles, methods and systems of taxation with special reference to the incidence and effect of the several taxes; the federal revenue system in the United States and the revenue system of Iowa. The class will use Daniel's Public Finance as a text. Assigned readings in Seligman's Essays on Taxation and other writers, with special assignment of topics for reports to be prepared from original sources. Open to students who have taken Course 2 or its equivalent. Dr. PATTERSON.

Fall term, Tu. Th., at 9.

8. Transportation. The course will deal chiefly with railroads; railroad organization and management, explanation of terms in common use in railroad accounts and reports, history of railroad development, discussion of rates, competition, discrimination, and state management (Hadley's Railroad Transportation), the commission system—state and inter-state. Dr. PATTERSON.

Winter and spring terms, Tu., Th., at 9.

9. Advanced Economics. Lectures and readings. The rise and development of the classical school of economists will first be considered. This will be followed by a study of the recent development of political economy. Portions of Adam Smith's Wealth of Nation, Malthus's Essays on Population, Ricardo's Political Economy, and Cairnes's Leading Principles will be read by the class. Later the writings of Marshall, Patten, and Clark

will be considered to show the recent development of the theory of rent and the newer aspects of the science. Primarily for graduates. Dr. PATTERSON.

Throughout the year, two hours to be announced.

10. **The History of Political Economy and Modern Socialism.** During the winter term the history of political economy, with introductory lectures on culture history, will be studied with special reference to the relations of social philosophy and political economy. In the spring term the later development of political economy will be considered with special reference to the development of modern socialism. The work undertaken is indicated by Bonar's *Philosophy and Political Economy* and Menger's *The Right to the Whole Produce of Labor*. This course is offered as part of the work for the graduate seminary in sociology. See Course 15 below and compare also Course 14. Course 3 or 7 must have been taken as a preparation for this course but Course 7 may be taken at the same time. Primarily for graduates. Professor Loos.

Winter and spring terms, hours to be appointed.

SOCIOLOGY AND POLITICAL PHILOSOPHY.

11. **Sociology.** Part I. A study during the fall term of the primary factors and forces of social phenomena, with introductory lectures on anthropology and ethnology; special attention is given to the earliest phases of political organization. Part II. Lectures during the winter term on police, sanitation, pauperism, and crime; this will be followed in the spring term by a study of municipal government, with special attention to social problems. The close relation of the so-called practical sociology to the German *Verwaltungslehre* will be pointed out. Open to Seniors and graduates. Professor Loos.

Fall and winter terms, Mon., Wed., Fri., at 9.

12. **Municipal Government.** A study of municipal government with particular reference to the economic and social problems of modern cities. Order of topics: Functions and sphere of city government; organization and methods of administration; expenditure and revenue, natural monopolies; typical city governments of Europe and America. The course is designed especially for those who have taken the course in Sociology which precedes it but it is open also to any student who has taken Economics 2 or 3 or Politics 1. Professor Loos.

Spring term, Mon., Wed., Fri., at 9.

13. **International Law.** A text-book course on International Law (Lawrence, *The Principles of International Law*) with lec-

tures on diplomacy and foreign relations. This course was given in 1900, and alternates with Chancellor McClain's course in International Law, namely, a course of lectures with recitations in Snow's Cases in International Law (See Courses of Study for Seniors in Law Department); the latter course will be given in 1901. Professor Loos.

Spring term, hours to be appointed.

14. **Political Philosophy.** A study of political philosophy with special reference to modern conditions and problems. During the fall term the class will read Spencer's *Man vs. the State*, Hufley's *Administrative Nihilism*, Plato's *Republic*, Aristotle's *Politics*; and selections from the writings of Thomas Hill Green and other modern philosophers. This will be followed by a course of lectures presenting a systematic sketch of the development of political philosophy and the elements of legal history during the winter term, and a more special examination of the current dogmas of individualism and socialism during the spring term. Four hours in the fall and two hours in the winter and spring terms. Compare Course 10 above. Primarily for graduates. Professor Loos.

Throughout the year, hours to be appointed.

15. **Graduate Seminary in Sociology.** Designed to assist graduate students in original and advanced lines of research. Members of the Seminary will be expected to take Course 14 as part of their work in 1900-1. Course 10 is also commended to their attention. During the past year exhaustive papers were prepared by individual members of the seminary on the following topics: *The State Care of the Insane in Iowa*; *the Problem of the Unemployed*; and *the Economic Functions of Government*. Professor Loos.

Throughout the year, hours to be appointed.

GOVERNMENT AND ADMINISTRATION.

PROFESSOR SHAMBAUGH.

To indicate clearly the order in which the several subjects in Government and Administration are presented for purposes of university instruction, the principal subjects are first grouped into four general courses, namely: *Politics I, Politics II, Politics III, and Politics IV*. Then, to indicate more clearly the scope and treatment of the several subjects, a specific statement is made of each subject viewed as an independent course.

Politics I. Historical and Descriptive Politics. A study, historical and descriptive, of the leading governments of ancient and modern times. This is a comparative study of political

institutions. Historical and Descriptive Politics is here regarded as the fundamental course in Government and Administration. Open to all students except Freshmen.

Throughout the year, three hours, Mon., Wed., Fri., at 8.

Politics II. Principles of Government in the United States. A study of the principles of American government—national, commonwealth, and local. Fall term: History of Constitutional Government in the United States, including a detailed analysis of leading state papers, e. g., colonial charters, plans for union, commonwealth constitutions, etc. Winter term: American Constitutional Law, wherein the principles of Government in the United States will be discussed from the standpoint of judicial interpretation. Spring term: Local Government in the United States. The course in Local Government will alternate with a course in Political Parties in the United States. Open to Juniors and Seniors.

Throughout the year, three hours, Mon., Wed., Fri., at 9.

Politics III. Political Theory, and Comparative Constitutional Law. A study of the general and theoretical aspects of political phenomena. Fall term: Outlines of a system of political theory. Winter term: Comparative Constitutional Law, wherein the theoretical aspects of the constitutions of England, France, Germany, and the United States will be considered. Spring term: Papers on selected topics in Political Theory and Comparative Constitutional Law will be prepared and read by the students. This is an advanced course for Seniors and graduates. Seminary plan.

Throughout the year, two hours, Tuesday evening.

Politics IV. American Political Theory. A study in the history of political theory in the United States, wherein the writings of Hamilton, Madison, Washington, Jefferson, John Adams, Clay, Webster, Calhoun, and Lincoln will be read and discussed. This is an advanced course. Only a limited number of students are admitted. Seminary plan.

Throughout the year, Tu., Th., at 9.

1. Historical and Descriptive Politics. A study, historical and descriptive, of the leading governments of ancient and modern times. This is a comparative study of political institutions, wherein the more general and obvious phases of political phenomena will be presented. Fall term: The theory of evolution as a working basis in the study of Historical Politics; some general considerations in Anthropology; primitive institutions of the Indo-Europeans; the origin of government; the political institutions of the ancient Greeks; the political institutions of the Romans. Winter term: Roman Law—four weeks; Feudalism;

the government of France; the governments of Germany—the Empire and Prussia. Spring term: the government of Switzerland—federal and cantonal; the government of England. Open to all students except Freshmen.

Throughout the year, three hours, Mon., Wed., Fri., at 8.

2. **History of Constitutional Government in the United States.** A study of the sources and early development of the principles of government in the United States. Herein the development of colonial governments, the growth of federalism, and the establishment of the first commonwealth governments will receive special consideration. The following documents will receive detailed analysis: colonial charters, plans for union, Articles of Confederation, Declaration of Independence, the first commonwealth constitutions and the Constitution of the United States. Open to Juniors and Seniors.

Fall term, three hours, Mon., Wed., Fri., at 9.

3. **American Constitutional Law.** A study wherein the principles of government in the United States will be discussed from the standpoint of judicial interpretation. The students will read and report upon selected cases in Constitutional Law. Open to Juniors and Seniors.

Winter term, three hours, Mon., Wed., Fri., at 9.

4. **Local Government.** A study of Local Government in the United States, wherein the development of the several forms of township, county, and township-county government will receive special consideration. This course will alternate with the course in Political Parties. Open to Juniors and Seniors.

Spring term, three hours, Mon., Wed., Fri., at 9.

5. **Political Parties.** A study in the practical workings of American government, wherein the history, organization, operation, and influence of political parties will be discussed. This course will alternate with the course in Local Government. Open to Juniors and Seniors.

Spring term, three hours, Mon., Wed., Fri., at 9.

6. **American Political Theory.** A study in the history of political theory in the United States, wherein the writings of Hamilton, Madison, Washington, Jefferson, John Adams, Clay, Webster, Calhoun, and Lincoln will be read and discussed. This is an advanced course, and is offered for those students who desire to make a more exhaustive study of American Government than is possible in the general course, Politics II. Only a limited number of students are admitted.

Throughout the year, Tu., Th., at 9.

7. **Government in Iowa.** A study, historical and descriptive, of the political institutions of the commonwealth of Iowa.

Spring term, two hours.

8. **Political Theory.** In this course an attempt will be made to present an outline of a system of pure political theory. An advanced course for Seniors and graduates. Seminary plan.

Fall term, two hours, Tuesday evening.

9. **Comparative Constitutional Law.** A comparative study of the constitutions of England, France, Germany, and the United States, wherein the general and theoretical aspects of government will be considered. An advanced course for Seniors and graduates.

Winter term, two hours, Tuesday evening.

10. **Administrative Law.** A comparative study of Administrative Law in France, Germany, England, and the United States. An advanced course for graduates.

One term, two hours.

11. **Roman Law.** A course of about twelve lectures on the history and principles of the Roman Law. These lectures are given in connection with and as a part of the general course, Politics I. See above.

12. **Elements of Jurisprudence.** A study of the definition, principles, classification, and divisions of law. Also a discussion of the origin and development of the leading systems of law.

PHILOSOPHY.

PROFESSOR PATRICK; ASSISTANT PROFESSOR SEASHORE,
MISS WILLIAMS.

1 **Deductive Logic.** An elementary course. Text-book: Creighton's Introductory Logic, with reading in Welton's Logic and Mill's Logic. Professor PATRICK.

Fall term, two sections, Tu., Th.

2. **Inductive Logic.** An introductory course on scientific method. Lectures, with supplementary reading in Mill's Logic, Jevons's Principles of Science and Welton's Logic. Professor PATRICK.

Winter term, two sections, Tu., Th.

3. **Ethics.** An elementary course on the psychology of conduct and the moral judgment, the development of conduct and ethical theories, the standards of morality, duties, virtues, and the moral life of the individual and society. The reading of Mackenzie's Manual of Ethics will be accompanied by lectures. Dr. SEASHORE.

Spring term, two sections, Tu., Th.

4. **General Psychology.** This is an introductory course in general psychology and should be taken preliminary to all advanced courses in psychology. The lectures will be accompanied

throughout the year by demonstration with apparatus from the psychological laboratory and by supplementary reading from the standard texts. Fall term: Introductory lectures on physiological Psychology. The brain, spinal cord, nerves, localization of brain function, and the structure of the organs of the special senses. Dissection of the sheep's brain. Introductory study of sensation. Winter term: Sensation, perception, apperception, illusions, feeling. Spring term: Complex mental processes, memory, imagination, thought, judgment, reasoning, volition.

Students wishing to take five hours a week in psychology may supplement this course by Course 5 in laboratory work. Professor PATRICK and Dr. SEASHORE.

Throughout the year, two sections, Mon., Wed., Fri.

5. **Laboratory Course in Experimental Psychology.** The exercises are so arranged as to familiarize the student with the method, the apparatus, and the results of typical experiments in each of the approved lines of psychological research. Two periods are spent on each problem. During the first the experiment is performed by each individual, the class being divided into groups of two. During the second the results and the literature on the subject are discussed on the seminar plan. The manual of the course is furnished in mimeograph copies. Prerequisite, Course 4, or some other introduction to psychology. Dr. SEASHORE and Miss WILLIAMS.

Fall and winter terms, Tu., 2:30 to 3:30, Th., 2:30 to 4:30.

6. **History of Philosophy.** A course in Greek, mediæval and modern philosophy. First term: Pre-Socratic philosophy, Socrates and the minor Socratic schools. Plato. The latter half of the term, seven weeks, will be devoted wholly to the philosophy of Plato and to the reading of the Platonic dialogues. Each member of the class will read and report upon one of the dialogues and the whole of the Republic will be read and studied by the class. Second term: Aristotle and the post-Aristotelian schools. The philosophy of the Christian era. Scholasticism, Descartes, Spinoza, Leibniz. The English empirical movement. Third term: The first third of this term is spent upon the philosophy of Kant. Then follows an outline course in the German and English philosophy of the nineteenth century.

This course may be elected by Juniors and Seniors. Where possible, it should be preceded by the elementary courses in psychology, logic and ethics. Professor PATRICK.

Throughout the year, Mon., Wed., Fri.

7. **Introduction to Metaphysics.** Definition and scope of Metaphysics. Discussion of Metaphysical terms. Theories of reality with a critical examination of Materialism. The seminar

method will be followed. This course is primarily for graduate students. It may, by special permission, be taken by undergraduate students who have the necessary preparation. Professor PATRICK.

Fall term, two hours.

8. **Philosophy of Theism.** The conception of God in the religions of the Hindoos, Persians, Egyptians, Jews and Greeks. The conception of God in the Christian religion and in modern thought. Final causes. The bearing of evolution on theism. Pantheism. This course is a continuation of Course 7 and is primarily for graduates. Professor PATRICK.

Winter term, two hours.

9. **History and Philosophy of Mysticism.** The chief ancient mediæval and modern mystics will be studied in detail so far as time permits, and the principal mystic writings will be examined. Vaughan's Hours with the Mystics, Racejac's The Bases of the Mystic Knowledge and Inge's Christian Mysticism will be used as texts. This course is a continuation of Course 8 and is primarily for graduates. Professor PATRICK.

Spring term. Two hours.

10. **Genetic Psychology.** A general course in the psychology of the child with special reference to the laws of mental development. This course will be introduced by a short course in comparative psychology. Prerequisite Course 4.

Winter term, Tu., Th.

11 **Experimental Psychology of the Child.** A course in the experimental study of school children. The purpose is to give training in the methods of experimental child-study by making actual investigations on current problems in the development of mind. This year the class met in the city grammar school and performed tests on sight, hearing, fatigue, and nervous condition. This course is primarily for graduate students. Prerequisite, Course 4. Dr. SEASHORE.

Spring term, Sat., 8-12 a. m.

12. **Abnormal Psychology.** Hypnosis, sleep, alterations of personality, automatism, hallucinations and illusions, and the psychology of the abnormal and defective classes will be discussed. Lectures, with required reading. Prerequisite, Course 4. Dr. SEASHORE.

Spring term, Tu., Th.

13. **Advanced Psychology.** A systematic study of the problems of normal, adult, human psychology. Reading, lectures and discussions. Primarily for graduate students. Dr. SEASHORE.

Fall and winter terms, Tu. and Th.

14. **Special Research in Psychology.** Original investigation of special problems in psychology. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *University of Iowa Studies in Psychology*. This course is primarily for graduate students, but may be taken by undergraduates who have had Courses 4 and 5. Dr. SEASHORE; Professor PATRICK and Miss WILLIAMS.

Throughout the year, hours to be arranged with instructors.

All courses in philosophy are elective, except that candidates for the Degree of Bachelor of Philosophy are required to take the equivalent of three terms' work of two or three hours each in this department. Course 4, or Courses 1, 2 and 3 are recommended for this requirement.

Courses 1, 2, 3 and 4 are open to Sophomores.

During the year 1900, the new Psychological Laboratory in the new Collegiate building will be occupied. It will include five commodious laboratory rooms, a work shop, a dark and quiet room, in addition to the lecture rooms, offices and seminary room belonging to the department of Philosophy. The laboratory has been especially designed and built for its purpose and provided with water, gas and complete electric connections. A partial description of the equipment of the laboratory will be found in this Catalogue under the head of Material Equipment of the Collegiate Department. The library of Philosophy is supplied with the standard works in logic, psychology, ethics and philosophy and is open daily from 8 a. m. to 5 p. m.

PEDAGOGY.

PROFESSOR MCCONNELL AND MR. DORCAS.

1. **General Pedagogy.** This course is designed primarily for students who have had no experience in teaching. The work will include a study of assigned texts, lectures, reports, and readings, and will consist of a general treatment of the principles and practice of teaching. The text-books used are Putnam's *Manual of Pedagogics*, Gregory's *Seven Laws of Teaching*, Roark's *Method in Education* and White's *School Management*. The course is open to all students who are permitted by the rules of the University to take elective courses. Mr. DORCAS.

Throughout the year, five hours a week.

2. **Philosophy of Education.** It is the purpose in this course to set forth the aims of education, and the laws upon which the child's development depends; to treat in some detail the educational doctrines and theories that have become effective or that promise to become effective in school teaching and administra-

tion; and to devote some time to the application of the laws of the child's development, to the selection and arrangement of the materials of instruction.

The course is open to Juniors, Seniors, and special students.

This course should be preceded by a course in general psychology or an extended experience in teaching. Professor McCONNELL.

Fall and winter terms, Mon., Wed., Fri., at 10.

3. **Teaching and Governing.** This course will embrace a careful study of De Garmo's Essentials of Method and other related literature. The methods of teaching the various subjects of the public school curriculum will be discussed and illustrated. Through the kindness of the school authorities of Iowa City, students taking this course will be allowed the privilege of visiting the schools freely, for the purpose of familiarizing themselves with the methods of work employed. Lectures on school government, school law and school sanitation will conclude the course. Professor McCONNELL.

Throughout the year, Tu., Th., at 10.

4. **History of Education.** This course will consist of three distinct parts: (a) The ancient and mediæval period, (b) the modern period, and (c) the history of education in the United States. The work will consist of lectures, recitations, and essays on assigned topics. Mr. DORCAS.

Throughout the year, two hours a week.

5. **Organization and Administration.** This course will deal with the problems of organization and administration as these problems present themselves to the school superintendent or principal. In addition to a consideration of the general powers and duties of the superintendent, the following topics will receive special attention:

The gradation and classification of schools;

The organization of courses of study and

The adjustment of programs;

The relation of the superintendent to patrons, teachers, pupils and to the community at large.

Lectures and reports. Professor McCONNELL.

Fall term, two hours a week.

6. **School Systems.** This course will require of the student an examination of the state and city school systems of the United States. Lectures and reports. Professor McCONNELL.

Winter term, two hours a week.

7. **Child Study.** In this course the history, literature, and methods of work in child study will be treated. Professor McCONNELL.

Spring term, two hours a week.

8. **Secondary Education.** This course will include a study of the report of the Committee on Secondary School Studies and the more recent reports that have been presented to and adopted by various special organizations which have given serious consideration to the problems of Secondary Education. The organization of courses of study and the methods of instruction in high schools will receive specific treatment in lectures, discussions, and reports. Professor McCONNELL.

Spring term, Mon., Wed., Fri., at 10.

9. **Seminary in the Theory and Practice of Teaching.** This Seminary will afford an opportunity for the special investigation of educational problems. The work is germane to Courses 2, 3 and 7. Membership in this Seminary is contingent upon a special arrangement with the professor in charge. Professor McCONNELL.

Throughout the year, Tuesday, 7:30—9:30 p. m.

10. **Seminary in Secondary Education.** This Seminary will afford its members an opportunity to make a practical study of high school work. The work will include a careful examination of the text-books used in secondary schools, the preparation of examination lists for use in secondary schools, and the judging of examination papers prepared by high school pupils. Mr. DOBCAS.

Throughout the year, two hours a week.

NOTE.—The courses in Pedagogy, except as otherwise designated, are open to Juniors, Seniors, and special students. Candidates for the degree of Bachelor of Didactics are required to take three full terms' work in Pedagogy.

Students who are intending to fit themselves for teaching in the public schools are advised to select their undergraduate work with special reference to the staple branches of instruction in the public high schools.

PHYSICS.

PROFESSOR VELEN; MR. BOWMAN, MR. SIEG.

1. **Mechanics and Heat.** Lectures and recitations. Professor VELEN and Mr. SIEG.

Fall term, daily at 11.

2. **Electricity and Magnetism.** Lectures and recitations. Professor VELEN and Mr. SIEG.

Winter term, daily at 11.

3. **Sound and Light.** Lectures three times a week, laboratory work twice a week. Professor VELEN, Mr. BOWMAN and Mr. SIEG.

Spring term, lectures, Mon., Wed., Fri., at 11.

Courses 1, 2 and 3 constitute the general elementary work in physics required of all scientific and engineering students, and must be preceded by the mathematics of the Freshman year.

4. **Physical Measurements and Observations.** Laboratory work. Mr. BOWMAN.

One term, daily.

5. **Measurements and Determination of Constants.** Lectures and laboratory work. Professor VELEN and Mr. BOWMAN.

One term, daily.

6. **Measurements.** Special investigation and research to follow Courses 4 and 5. Professor VELEN and Mr. BOWMAN.

Courses 4, 5 and 6 may be taken any term, but must be pursued in the order of their numbers. These courses are planned for students taking a second year in physics. Course 4 is required of electrical engineering students in the fall of their Junior year. In the winter of the same year they take 5, but in their case this course deals more especially with electrical measurements.

7. **Direct Current Dynamos and Motors.** Three lectures a week, laboratory work twice a week. For electrical engineering Juniors. Professor VELEN and Mr. BOWMAN.

Spring term, daily.

8. **Theory of Electricity and Photometry.** Lectures five times a week, laboratory work ten hours. Professor VELEN and Mr. BOWMAN.

Fall term.

9. **Alternate Current Machinery.** Five lectures a week, ten hours of special laboratory work. Professor VELEN and Mr. BOWMAN.

10. **Distribution of Electrical Energy; Telegraph and Telephone.** Lectures and laboratory work. Professor VELEN and Mr. BOWMAN.

Spring term, ten hours a week.

The last three numbers form the Senior year course of the electrical engineers, and will in general include five lectures a week, the subjects treated being indicated above. The work in the laboratory consists of practice with the photometer, experiments, and measurements on the various machines, transformers, and other apparatus, and tests of insulators, conductors, samples of iron, etc. The student has the choice in the latter part of the year of preparing a thesis or carrying out some research, or doing other special work.

11. **Electricity and Magnetism.** For civil engineering students. Two lectures a week, laboratory work three times a week. Professor VEBLEN and Mr. BOWMAN.

Fall term, daily.

12. **Dynamo-electric Machinery.** Lectures to civil engineering students. Professor VEBLEN.

Winter term, three times a week.

13. **Heat and Thermodynamics.** Lectures to Junior electrical and civil engineering students. Mr. BOWMAN.

Spring term, twice a week, with one day each week in electrical laboratory for civil engineers.

14. **Shop Work.** For electrical engineers. Mr. BOWMAN.

Throughout the year, twice a week.

15. **Seminary.** The systematic reading of physical and electrical journals by those students who are well enough equipped, is encouraged by a weekly Seminary, conducted for this purpose by Professor VEBLEN.

In addition to the above, lectures and laboratory courses in selected topics will be given as circumstances may require or the facilities for instruction may admit. Laboratory work of any grade may be taken any term, three or more times a week.

CHEMISTRY.

PROFESSOR ANDREWS, DR. VON ENDE, MR. BRINK.

1. **General Chemistry.** Lectures illustrated by experiments and accompanied by a weekly quiz and laboratory work. Professor ANDREWS.

Fall term, four times a week, laboratory once a week.

2. **General Chemistry.** (Continued.) Lectures illustrated by experiments. Introduction to qualitative analysis. Laboratory work, six hours a week. Professor ANDREWS and Dr. VON ENDE.

Winter term: Lectures Tu., Th., at 9. Laboratory at hours to be arranged.

3. **General Chemistry and Qualitative Analysis.** Lectures once a week, laboratory work eight hours. The student is instructed in the theory and practice of qualitative analysis and is expected to carry out about twenty-five complete analyses besides a number of partial ones. This course, except the lectures, can be taken in any term. Professor ANDREWS and Dr. VON ENDE.

Spring term, lectures at 9, laboratory eight hours, at times to be arranged.

4. Quantitative Analysis. Lectures on general principles and sources of error, once a week, laboratory ten hours. Professor ANDREWS.

Winter term, in odd numbered years. Fall term, even numbered years.

Lectures Tuesday at 4:30, laboratory according to arrangement.

6. Quantitative Analysis. Laboratory practicum. The student extends his work from the analysis of substances of definitely known composition to commercial products of various kinds and makes a study of certain technological methods. Professor ANDREWS.

Any term, ten hours a week.

6. Theoretical and Physical Chemistry. Lectures on the general principles of thermochemistry, electrochemistry, and chemical dynamics, accompanied by a parallel course of laboratory work covering, for example, the determination of molecular weights, experimental study of the laws of Avogadro and Dulong and Pettit, the phenomena of mass action and of dissociation. Ostwald's Outlines of Physical Chemistry has hitherto been used as an auxiliary text. This course must be preceded by at least the first three courses in chemistry and the first three in physics or their equivalent. It will probably only be given in the even numbered years. Professor ANDREWS.

Spring term, lectures or laboratory work daily at hours to be arranged.

7. a. Organic Chemistry. Lectures on the fatty series, illustrated experimentally, so far as the subject will permit. Professor ANDREWS.

Winter term, odd numbered years, twice a week.

7. b. Organic Chemistry. Lectures on aromatic and heterocyclic compounds. Professor ANDREWS.

Spring term, odd numbered years, three times a week.

8. Electrochemistry. Lectures for students of electrical engineering, comprising the theory of electrolysis, chemistry of primary and secondary batteries, electrometallurgy and other industrial applications. Professor ANDREWS.

Spring term, even numbered years only, five times a week.

9. Organic Preparations. Laboratory work comprising preparation of typical organic compounds, methods of synthesis and study of reactions. This course must be preceded or accompanied by Course 7. Professor ANDREWS.

Any term, laboratory daily, twelve laboratory hours a week. This course may also be taken as a minor, six hours a week in winter and spring terms, accompanying Courses 7 a and 7 b.

10. Determinative Mineralogy and Crystallography. Laboratory practicum. Dr. VON ENDE.

Winter and spring, five times a week.

Course 3, Qualitative Analysis, and 4 and 5, Quantitative Analysis, except as noted, and 9 Organic Preparation, may be taken in either fall, winter, or spring term.

Course 6, may be taken after 3. This order is only recommended to those who devote no more than four terms in all to chemistry.

ANIMAL MORPHOLOGY AND PHYSIOLOGY.

PROFESSOR HOUSER; MR. LAMBERT.

1. General Morphology and Physiology. A laboratory course, accompanied by lectures, for the study of selected types representing the several great groups of animals. (a) General biological phenomena, the unicellular animals, and representatives of the higher invertebrate groups. Fall term. (b) Dissection of typical vertebrates, the microscopic morphology of vertebrates, and lectures and experiments covering the elements of physiology. Winter and spring terms. Professor HOUSER and Mr. LAMBERT.

Throughout the year, daily, ten hours a week.

2. Comparative Histology. This is a course in the comparative histology of animal tissues and systems of organs. Emphasis is here given to the laboratory technique of histology. To this end, the student is expected to become proficient in the standard methods of fixing, staining, imbedding, sectioning, mounting, and the other processes incident to the making of microscopical preparations. Prerequisite: Course 1. Professor HOUSER and Mr. LAMBERT.

Fall term, daily. Laboratory, four days a week, eight hours. Lectures one day per week.

3. Comparative Neurology. A course for the detailed study of the nervous system. The laboratory work involves the use of the special technique of Golgi, Nissl, Weigert, and Ehrlich. The architecture of the nervous system is presented in a series of lectures and demonstrations. The literature of the subject in English, French, and German will be freely utilized for reference and for assigned reading. Prerequisite: Courses 1 and 2. Professor HOUSER and Mr. LAMBERT.

Winter term, daily. Laboratory, Mon., Wed., Fri., six hours. Lectures Tu., Th.

4. Vertebrate Embryology. Laboratory work, accompanied by a series of lectures. The lectures discuss the general prob-

lems of vertebrate embryology, and are supplemented by collateral reading. The laboratory work embraces an examination of the sex cells of various animals during their early developmental stages, and a detailed study of the chick during the first four days of incubation. Prerequisite: Courses 1 and 2. Professor HOUSER and Mr. LAMBERT.

Spring term, daily, ten hours a week.

5. **Advanced Morphology.** Special courses of laboratory work will be arranged to meet the needs of those who desire to pursue morphological studies beyond the outlined Courses 1, 2, 3 and 4. Opportunities are offered for investigation in some branch of anatomy, histology, or embryology. Professor HOUSER.

Throughout the year, ten hours a week.

6. **Advanced Physiology.** A course for advanced students who desire to continue the investigation of physiological processes in greater detail. Laboratory work and library research. Prerequisite: Course 1. Professor HOUSER.

Throughout the year, three times a week.

ZOOLOGY.

PROFESSOR NUTTING; ASSISTANT PROFESSOR WICKHAM.

1. **Invertebrated Animals**—more especially the subkingdoms, *Cœlenterata* and *Echinodermata*. Professor NUTTING.

Fall term, daily.

2. **Mammalia.** The principles of classification are here applied to a more limited group. More attention is paid to generic and specific characters and more detailed descriptions are made, daily practice being afforded by the use of the large series of mammals in the Hornaday collection and main museum. Instruction in the preparation of skulls and skeletons is given to students desiring it. Professor NUTTING.

Winter term, daily.

3. **Ornithology**, including instruction in field work. Upon this course the whole work in systematic zoology is centered. Owing to the very large series of birds (about 11,000 specimens) in the museum, there is ample material for systematic work during the term. Professor NUTTING.

Spring term, daily.

4. **Entomology.** Insect anatomy and development. Lectures and laboratory work. Assistant Professor WICKHAM.

Fall term, three hours a week.

5. **Entomology.** The principles acquired in the preceding term will be applied to the study of systematic entomology. Assistant Professor WICKHAM.

Winter term, three hours a week.

6. **Entomology.** The studies of the preceding term will be continued. Throughout this and the preceding course special attention will be given to the philosophical bearings of the subject. Assistant Professor WICKHAM.

Spring term, three hours a week.

7. **Lectures in Speculative Zoology.** This course is devoted to a presentation of the more prominent theories concerning the origin and evolution of animal forms and a historical review of the position held by the most prominent workers in speculative zoology. Special attention will also be paid to a study of the habits, instincts, and intelligence of animals. The course will be open to Juniors and Seniors. Professor NUTTING.

Throughout the year, two hours a week.

8. **Thesis.** Equivalent to two terms' work. Advanced work in any group of animals of which the museum contains a sufficient series. Free access to any specimens or books on the museum floor is accorded to students doing thesis work in zoology, and a convenient study room has been fitted up for the use of advanced students.

The above courses are intended to be consecutive, except that Courses 4, 5 and 6 may follow 1, 2 and 3, in animal morphology, and 7 may be taken by Juniors and Seniors, without previous work in natural science. A combination of Courses 4, 5, 6 and 7 is recommended for students desiring a five hours' course which will include a critical study of a definite group of animals together with the application of biological principles elucidated in Course 7. This course is more particularly designed in the interest of students who do not intend to specialize in zoology.

The museum affords an abundance of material for study, and this is supplemented by (a) library of zoological works; (b) photographs of specimens studied, the photographs to be placed in the note books along with the descriptions; and (c) lectures in which the salient points of the various groups of animals are defined, and habits, distribution, etc., described.

Students taking special courses in zoological science may receive instruction in field work and in the preparation of museum material.

GEOLOGY.

PROFESSOR CALVIN.

1. **Principles of Geology.** Lectures, illustrated by museum specimens, views, maps and microscopic preparations.

Throughout the year, twice a week, Tu., Th., at 9.

This course may be supplemented with Course I in astronomy.

2. General and Practical Geology. During the fall term this course embraces lectures and field observations on the geological phenomena in the vicinity of Iowa City as an introduction to the fundamental facts of the science. The preliminary work also embraces the laboratory investigation of material collected during studies in the field. This is followed by the general facts of rock-making, continent-making, and the evolution of topographic forms. During the winter and spring terms attention is given to the chronological succession of strata in the Mississippi Valley, with studies relating to the genesis, lithology, geographical distribution, economic products, and typical faunas of the several formations. Large series of rocks, minerals, fossils, maps, lantern slides, and photographs afford the material for lecture illustration and laboratory study.

Throughout the year, daily at 10. Additional hours for laboratory work arranged to suit the convenience of the individual students.

3. Invertebrate Paleontology. Lectures and laboratory research.

Throughout the year, daily. Lectures at 8. Laboratory work at convenient hours from 8 to 5.

4. Economic Geology of the United States. Lectures, with library and laboratory research.

Throughout the year, daily.

5. Special Courses in Pleistocene Geology, local geology and paleontology, characteristics and faunas of special formations, and similar subjects are arranged to meet the wishes of individual students.

Throughout the year, or through a single term, two, three, or five hours a week.

BOTANY.

PROFESSOR MACBRIDE; PROFESSOR SHIMEK.

1. General Botany. A course of popular lectures and special studies intended to illustrate the purpose, method and scope of present botanical research, the progress of botanical science in recent years and the general economic importance of the subject. The lectures are illustrated by material from the Herbarium and the field, and no effort is spared to give the course the highest practical value. This course, though intended primarily for those intending to teach, is open to all students; it is complete in itself, but will be accepted as one of the three

required terms in the case of those who elect Botany as material science. Professor MACBRIDE.

A course of illustrated lectures, one every Monday evening, accompanies this course.

Spring term, five hours a week.

2. **Morphological Botany.** This course consists of lectures and laboratory work and is intended to illustrate the structure and life-history of the several types presented by the vegetable kingdom. Goebel's *Outlines of Classification* is used as basis. Special attention is paid to all available forms of our cryptogamic flora; slime moulds, schizophytes, diatoms, algae, fungi, mosses, ferns and their allies are successively passed in review. This course is open to all students who have had Course 1; and to all students who are credited with botany in their preparatory course. While it is in some particulars a review of the preparatory courses, it is also made the basis of work in the subsequent courses. Professor MACBRIDE and Professor SHIMEK.

Fall term, ten hours a week.

3. **General Plant Histology. General Structural Botany.** This course requires ten hours a week in the laboratory. Daily lectures accompany the laboratory work. In this connection the student receives special instruction in the preparation of vegetable sections, staining, mounting, etc., and is required to prepare for himself approved slides in illustration of all the topics presented in so far as these are referable to the microscope. Professor MACBRIDE and Professor SHIMEK.

Winter term, ten hours a week.

4. **General Plant Physiology.** This course consists of lectures, field work, laboratory work and experiments, supplemented by collateral reading. The most important problems of vegetable physiology are discussed and illustrated by simple experiments. Detmer, Vines, Darwin, and all other standard authorities are available to the student for collateral reading. Professor SHIMEK.

Spring term, ten hours a week.

5. **General Mycology.** This is a course in the fungi and consists of laboratory work, supplemented by lectures, experiment and collateral reading. It is an advanced course. Students make and classify collections for themselves. In identifying material collected, students are aided by extensive mycologic literature, *exsiccati*, etc. Professor MACBRIDE.

Fall term, daily as arranged.

6. **Vegetable Embryology.** A special course with lectures and laboratory work, including collateral reading. This course is confined chiefly to the consideration of the embryology of

phenogamous plants. Phytocytology is taken up incidentally, and the peculiarities of nuclear division and karyokinesis noted. Professor MACBRIDE.

Spring term, daily as arranged.

7. **Special Work in Morphology.** A course designed for advanced students either graduate or special, offering opportunity for more exact investigation. Professor MACBRIDE and Professor SHIMEK.

Throughout the year.

8. **Special Systematic Work.** The large collections of the University now afford unusual opportunity for the special study of particular groups and families, and students are invited to engage in original research in the revision of accumulated species. Professor MACBRIDE and Professor SHIMEK.

Throughout the year.

9. **Special Applied Botany.** A course for students of Pharmacy and Medicine. The official *Materia Medica* is made the basis of the special study of medicinal plants, their nature, origin and relationships. Professor MACBRIDE.

Winter and spring terms.

10. **Thesis Course.** Designed for such students, either graduate or others, as desire to undertake problems of original research. Professor MACBRIDE and Professor SHIMEK.

Throughout the year.

11. **Seminary.** A special course in reading and study of current literature is arranged for such students as have completed at least three courses in Botany. Students are expected to prepare written reviews and criticisms of the literature presented, to engage in discussion of topics specially assigned, and to carry forward at appropriate seasons special investigations in the field as directed. Professor MACBRIDE and Professor SHIMEK.

Throughout the year, one hour a week, Monday evening.

MATHEMATICS.

PROFESSOR WELD; ASSISTANT PROFESSOR SMITH, DR. WESTFALL.

MR. A. VON ENDE.

Classical and philosophical students are required to take Course I. Course 2 may, however, be substituted for this and the work otherwise required in ancient history. Scientific students must take Course 2. Civil and electrical engineering students are required to take Courses 2, 8 and 10. Further explanations will be found in connection with the following syllabus.

Freshman Mathematics for Classical and Philosophical Students.

1. *a, b. Algebra.* Exercises in the statement and solution of problems involving simple and quadratic equations; ratio, proportion, and variation; arithmetical, harmonic, and geometrical progressions; properties of series and the development of simple functions into series; the binominal theorem; permutations and combinations; continued fractions; logarithms with applications. Fall term and first half of winter term.

1. *b, c. Trigonometry.* Trigonometric functions and formulæ; logarithmic functions; solution of right and oblique angled triangles, both plane and spherical; practical applications to problems in surveying, navigation, geography, astronomy, and mensuration. Second half of winter term and spring term.

Two divisions; throughout the year, Mon., Wed., Fri., at 11:00 and 1:30. DR. WESTFALL and MR. A. VON ENDE.

Freshman Mathematics for Scientific and Engineering Students.

2. *a. Algebra and Trigonometry.* In algebra the work is nearly the same as that of 1 *a*. Fall term.

2. *b. Trigonometry.* The same as Course 1 *b, c*, with the addition of a discussion of Euler's, and Demolvre's formulæ and the development of the trigonometric functions into series. Winter term.

2. *c. Theory of Equations.* The work in the Theory of Equations will include the study of imaginaries, the properties of the general equation and their graphical representation, methods of approximating to the roots of higher equations with numerical coefficients, Cardan's solution of cubics, and biquadratic equations. The rudiments of the theory of determinants are also presented. Spring term.

Five divisions, daily, throughout the year at 8, 9, 10, 1:30 and 2:30. PROFESSOR WELD, ASSISTANT PROFESSOR SMITH, DR. WESTFALL and MR. A. VON ENDE.

Sophomore Mathematics.

3. *a. Analytical Geometry.* The point, right line, parabola, circle, ellipse, and hyperbola in Cartesian coordinates; discussion of the general equation of the second degree; analytical geometry of three dimensions; higher plane curves; etc. Fall term.

3. *b, c. Differential and Integral Calculus.* The fundamental principles of the calculus are studied and applied to the solution of problems in geometry, mechanics, etc. Winter and spring terms.

Two divisions; daily, throughout the year, at 8:00 and 10:00. ASSISTANT PROFESSOR SMITH and DR. WESTFALL.

Mathematics for Junior, Senior, and Graduate Students.

4. *a, b. Advanced Calculus.* A continuation of the work of the sophomore year; devoted particularly to such topics as the extension of Taylor's theorem, the theorems of Lagrange and Leibnitz, maxima and minima of functions of two or more variables, transformations of differential equations, variations, etc. Fall and winter terms.

4. *c. Differential Equations.* An elementary course devoted to the methods of solution of ordinary differential equations. Spring term. Open to all students who have completed Course 3. Throughout the year, Mon., Wed., Fri., at 9. Dr. WESTFALL.

5. *a, b. Theory of Functions.* Lectures, the work of Durege being used by the student for collateral reading. Fall and winter terms.

5. *c. Definite Integrals,* including a discussion of the Beta and Gamma functions. Lectures. Spring term.

Throughout the year, Mon. and Wed., at 11:00. Professor WELD.

6. *Elliptic Integrals and Functions.* Lectures and problems. This course may be taken in connection with 5.

Throughout the year, Fri., at 11:00. Professor WELD.

7. *Harmonic Functions.* *a.* Laplace's equation of continuity in rectangular, cylindrical, and spherical coordinates; Fourier's series and integral. Fall term. *b.* Applications of Fourier's series to problems in acoustics, heat, electricity, etc. Winter term. *c.* Cylindrical, zonal, and spherical harmonics with numerous applications to physical problems. Spring term.

Lectures. Throughout the year, Tu. and Th., at 11:00. Professor WELD. (This course will not be given in 1900-1).

8. *Differential Equations.* Lectures. The subject is to be treated from the standpoint of Sophus Lie's theory of continuous groups.

Throughout the year, Tu. and Th., at 9:00. Dr. WESTFALL.

9. *Determinants and Modern Geometry.* *a.* Determinants and the theory of quantics. Fall term. *b.* Modern geometry; the principle of *invariance*. Winter term. *c.* Modern geometry of three dimensions. Spring term.

Lectures. Throughout the year, Tu. and Th., at 11:00. Professor WELD.

10. *Analytical Mechanics.* *a.* Statics. Composition and resolution of forces; the funicular polygon; centers of gravity; moment of inertia; friction, etc. Fall term. *b, c.* Kinetics. Rectilinear motion; projectiles; constrained motion of a particle; the pendulum, etc. Winter and spring terms.

A course for civil and electrical engineering students, supplemented by a three hours' course in applied mechanics in charge of Assistant Professor MAGOWAN. (See course in civil engineering.)

Throughout the year, Tu. and Th., at 11:00. Assistant Professor SMITH.

11. Theoretical Mechanics. *a.* Problems in statics and dynamics; virtual velocities; the principle of least action; etc. Fall term. *b.* The dynamics of a particle, with special reference to the theory of orbital motion. Winter term. *c.* The potential theory, with special reference to attractions. Spring term.

Throughout the year, Mon., Wed., Fri., at 11:00. Assistant Professor SMITH. (This course will not be given in 1900-1.)

12. *a, b.* Hydromechanics. Laws of pressure; equilibrium and oscillation of floating bodies; conditions of equilibrium of a mass of rotating fluid; application to the figure of the earth. Equations of motion of a perfect fluid; motion of cylinders and spheres in an infinite liquid; waves.

12. *c.* Theory of Sound. Equations of motion; vibrations of strings and membranes; flexure of bars; equations of motion of a perfect gas. Open to all who have completed Course 3.

Throughout the year, Mon., Wed., Fri., at 11:00. Assistant Professor SMITH.

13. *a.* The Method of Least Squares, with numerous applications to the reduction of series of physical observations.

Fall term only; Mon., Wed., Fri., at 2:30. Assistant Professor SMITH.

14. *b.* The Theory of Surfaces, with problems.

Winter term only; Mon., Wed., Fri., at 2:30. Dr. WESTFALL.

15. *c.* Quaternions. Lectures.

Spring term only; Mon., Wed., Fri., at 2:30. Professor WELD.

16. The Mathematical Seminary is conducted for the benefit of students making a special study of mathematics and is open to all who have completed Course 3. The topics upon which papers are prepared under the direction of the several instructors are such as are suggested by the regular work of the various courses.

Throughout the year, Tuesdays at 2:30.

ASTRONOMY.

PROFESSOR WELD.

The courses in Astronomy are open to all Sophomores, Juniors and Seniors. The two here offered may be taken simultaneously or in succession. Others will be added as soon as necessary arrangements can be made. The University is pro-

vided with a small but well equipped students' observatory. (See Material Equipment, page 104.)

1. **General Astronomy.** A course of lectures on descriptive astronomy for the general student. This course may be supplemented by Course 1 in Geology, which is given at the same hour on Tuesdays and Thursdays.

Three lectures a week, throughout the year, Mon., Wed., Fri., at 9:00.

2. **Practical Astronomy.** The student is taught the use of the sextant, transit instrument, clock, chronograph, etc.; the arrangement of the *American Ephemeris and Nautical Almanac*; and the general principles of time, latitude, longitude, and azimuth determination.

Two hours a week, throughout the year, Tu., Th., at 9:00; supplemented by work at the observatory.

CIVIL ENGINEERING.

PROFESSOR SIMS; ASSISTANT PROFESSOR MAGOWAN, MR. BEGG.

The Civil Engineering, Electrical Engineering, and General Scientific Courses are identical throughout the Freshman year, and change may be made from anyone of these courses to another at the beginning of the Sophomore year; but after this year no subjects can be substituted for the required civil engineering studies without the approval of the professor in charge and special permission of the Faculty. Students in one class will not be allowed to take subjects in an advanced class without permission of the professor in charge.

So far as possible, instruction will be given by recitation from text-books. But where this method is not practicable, as in limes and cements and in some of the subjects treated under the head of Civil Engineering, the first part of the recitation periods will be devoted to quizzes, and the remainder to lectures.

It is expected that the University will inaugurate a regular course in Municipal and Sanitary Engineering and it is intended that such changes in the Civil Engineering course will be arranged in the coming year as will permit students to specialize along this line.

Saturdays, throughout the last three years of the course, are devoted to work in the field, shop, and laboratories, in making surveys, testing materials, constructing models, photography and blue-printing.

For all work requiring no special preparation outside of the class room, such as drawing, field work, laboratory exercises, some of the work in graphical statics, not less than two hours will be required for one hour of credit.

Only the subjects that appear in bold-faced type are given under the direction of the chair of Civil Engineering.

French or German. See Course I, under French, page 46; and Courses 1 and 2, under German, page 44. If French be elected in the Freshman year, English must be taken in the Sophomore year; but should German be elected, it must be continued through the Sophomore year. Freshman year, five hours a week, and Sophomore year, three hours a week.

Mathematics. See Courses 2, 3 and 10, under Mathematics, pages 75 and 76. Freshman and Sophomore years, five hours a week.

English. See Courses 1 and 4, under English, pages 48 and 49. For those electing French, two hours a week through the Freshman, and three hours a week through the Sophomore year; and for those electing German, two hours a week through the Freshman year.

Drawing. For general scientific, electrical and civil engineering students. The course comprises geometrical and mechanical drawing, oblique, isometric, cabinet, projections and orthographic and lettering. Linear perspective, shades and shadows. The work is given principally by means of personal instruction. The preliminary principles are studied from text and reference books, and their application is employed in making drawings from models and machinery to exact scale. Mr. BEGG.

Freshman year, fall, winter and spring terms, three hours a week.

Land Surveying. For civil engineering students. The construction, adjustment and use of the compass, level and transit. Recitations and lectures, and field work with transit, level and solar compass; making profiles, leveling, and drainage surveys. A section of land is surveyed and the location of all natural and artificial features determined and noted. Assistant Professor MAGOWAN and Mr. BEGG.

Sophomore year, fall term, five hours a week.

Mapping and Surveying. Pen topography, including the making of topographical symbols; platting of section survey from notes taken during the previous term, and making a finished map of the same. United States public land surveys, determination of true meridians, and a study of the rules and Supreme Court decisions governing resurveys and relocations of lost or obliterated corners. Assistant Professor MAGOWAN and Mr. BEGG.

Sophomore year, winter term, three hours a week.

Topographical Surveying and Mapping. A study of the adjustments and methods of use of the stadia, gradienter and plane table, etc., and the making of finished contour maps from notes

of surveys made by the students, with the above mentioned instruments. Assistant Professor MAGOWAN and Mr. BEGG.

Sophomore year, spring term, three hours a week.

Descriptive Geometry. The work in this study includes problems on the point, line, and plane; also the simple geometrical solids, shades and shadows, single and double curved and warped surfaces, and the generation and development of the same, and the solution of various practical problems. Mr. BEGG.

Sophomore year, winter and spring term, two hours a week.

Electricity and Magnetism. See Course 11, under Physics, page 67. This course is designed especially for the students in civil engineering, the object being a better general understanding of this important subject, both in general theory, and in the practice of making electrical measurements; also to give a more thorough knowledge of electricity preparatory to taking up the study of the dynamo and motor, in the winter term.

Junior year, fall term, five hours a week.

Analytical Mechanics. See Mathematics, Course 10, page 76.

Junior year, fall and winter terms, two hours a week.

Mechanics of Materials. For students in civil and electrical engineering. The treatment of this subject is designed to be such that the student shall acquire a thorough training in the elementary principles of the mechanics of materials, and he is then required to verify, by his own investigations, the experimental laws and many of the derived formulæ. Numerous problems taken from actual engineering practice are given for solution from time to time, in order that the student may be trained in the application of his knowledge. The study includes the resistance and elasticity of materials, resistance of pipes and riveted joints, bending and resisting moments, shears, elastic curve, deflection of simple, cantilever, restrained and continuous beams, strength of columns with concentric and eccentric loading, torsion and shafting and combined stresses, etc. Assistant Professor MAGOWAN.

Junior year, fall and winter terms, three hours a week.

Railroad Curves. The study of simple and compound curves and turn-outs. Enough field work is given to familiarize the student with the field methods of locating and running curves. Mr. BEGG.

Junior year, fall term, three hours a week.

Steam Engine and Locomotive. The subject is treated under four heads, Heat, Steam, Engine, and Boiler. Under Heat is treated the economic combustion of fuel; under Steam the physical properties and the energy contained; under Engine, the modern types of simple and compound engines are discussed,

with special reference to the locomotive. The students are given practical problems and are required to ascertain the indicated horse power from actual indicator cards, and to determine the efficiency of various engines from assigned data. The modern types of boilers are then discussed. Compressed air is also considered in connection with the transmission of power. Professor SIMS.

Junior year, fall term, two hours a week.

Graphical Statics. The course is so arranged that the study of the graphical method of determining stresses precedes that of the analytical method, it being the intention to assist the student to secure a mental photograph of the amount and kind of stress in the various members of structures, and thus provide him with a ready and impressive means of their comparison. The analysis, by this method, of roof trusses is first taken up, followed by that of the plate girder, and simple, cantilever, and swing bridges, with parallel and inclined chords, under various conditions of loading as required in the standard specifications, both for actual wheel concentrations and equivalent uniform loads, after which a course in metal and masonry arches is given. Professor SIMS.

Junior year, fall and winter terms, three times a week, and spring term four times a week.

Dynamo-electric Machinery, See Physics, Course 12, page 67. The importance of an elementary knowledge of this subject to the civil engineer in general practice is fully appreciated, and the course is designed to give the students a comprehensive knowledge of the laws governing the construction and operation of the dynamo and motor.

Junior year, winter term, three hours a week.

Theory of Stresses. Including the analytical determination of stresses and strains in all the structures analyzed by the graphical method. See Graphical Statics. Much time and study are devoted to this important subject. Professor SIMS.

Junior year, winter term, three hours a week; and spring term, five hours a week.

Limes and Cements. The instruction in this subject consists in assigned references, and a course of lectures on the principal properties of limes, hydraulic limes, and natural and artificial cements, with a general discussion of the nature and uses of concrete, followed by laboratory work. Each student is required to make and test briquettes of various cements, which will be furnished him for the purpose, and to calculate their relative values per unit of strength. Professor SIMS.

Junior year, winter term, two hours a week.

Civil Engineering. This subject is given by recitations and lectures, and is designed for the purpose of instruction in the practical application of the theoretical principles of civil engineering. The regular recitations and lectures are frequently interrupted by designs and estimates of the cost of the work under discussion. The subjects are treated with thoroughness commensurate with their relative importance and are: railway reconnaissance and location; theory of maximum economy in grades and curves; location of highways and resistance to traction thereon; hydrography; building materials; natural and artificial stones; quarrying and blasting; reaching deep foundation beds in earth, quick sand, water and silt, with pneumatic tubes, caissons and coffer dams, and by the Poetsch-Scoosmith freezing process; ordinary earth work and methods of computation; masonry, classification of and specification for; theory and practice of retaining walls; earth, loose rock, and light masonry dams and weirs; the construction of brick, masonry, and concrete arches; tunneling and the use of explosives; highway and street construction; railroad construction and maintenance of way; improvement of rivers and harbors, and canal transportation; street railways and comparison of street railway motors. Professor SIMS.

Senior year, fall term, four times a week; winter and spring terms, three hours a week.

Hydraulics. Instruction in this work is given by means of lectures, recitations, and laboratory work. The course includes the weight and pressure of water; head and center of pressure; computation and measurement of velocity and discharge through orifices, weirs, pipes, conduits, canals, and rivers; the investigation of meters and motors, and the determination of water power. Assistant Professor MAGOWAN.

Junior year, spring term, five hours a week.

Heat and Thermodynamics. See Course 13, under Physics, page 67. Junior year, spring term, three hours a week.

Chemistry. See Courses 1 and 2, under Chemistry, page 67. Senior year, fall and winter terms, five hours a week.

Structural Designing. Prior to the work of designing proper, the students are required to make tracings or drawings of existing structures and compare the sections and connections of the various members with standard specifications. This work is followed by the design of trestles, highway and railway bridges, dams, foundations, etc., of which complete working drawings are made. Professor SIMS.

Senior year, fall term, four hours a week; winter and spring terms, three times a week.

Geology. See Course 1, under Geology, page 71. Senior year, fall, winter, and spring terms, two hours a week.

Sanitary Engineering. The work offered under this course includes principally sewers and sewerage, and the cleaning of cities and towns. The separate and combined systems of sewers are studied and discussed. The details of various sewer systems, as set forth in plans and specifications for their construction, are carefully studied. The cost of construction, as taken from current contract prices, is especially noted, and the arrangement and action of plumbing fixtures are incidentally studied. The growing importance of this subject is fully realized, and it is the intention to keep the instruction fully abreast of the demands and needs of the present, and when possible, anticipate future needs and methods. Assistant Professor MAGOWAN.

Senior year, fall and winter terms, two hours a week.

Resistance of Materials. For civil and electrical engineers. This subject includes the strength, resistance, and properties, of engineering materials, their behavior under stress, and the demonstration of the experimental laws, ultimate strength, elastic limit, resilience, etc., by tests in the laboratory. Professor SIMS.

Junior year, winter term, two hours a week.

Water Supply Engineering. A study of the methods of collecting, purifying, storing, and distributing water. Assistant Professor MAGOWAN.

Senior year, spring term, three hours a week.

Specifications and Contracts. A study of various standard specifications and a discussion of the effect of general clauses in contracts of same. Professor SIMS.

Senior year, spring term, three hours a week.

Thesis. At the close of the spring term of the Senior year, an acceptable original thesis will be required from each student before graduation, unless equivalent work shall have been done on papers prepared for the Engineering Society.

For more detailed information and description of course, apply to the Professor in charge, or send for special announcement of Civil Engineering Course.

MILITARY SCIENCE AND TACTICS.

FRED S. HOLSTEEN, COMMANDANT.

Instruction in these subjects is prescribed for all male students of the Collegiate Department, except such as are especially excused. Students who, for any valid reason, may desire to be excused must appear in person before the military committee consisting of the commandant and five student captains, on the

first drill day of each term, at the Armory, at 4:30 p. m. Those who claim exemption on account of physical disability, when the same is not apparent, must present to the committee a certificate from the battalion surgeon. All students not specially excused will report to the instructor on the Monday immediately following the beginning of the term, at the Armory, at 4:30 P. M.

ORGANIZATION.

The students are organized for instruction into a battery of artillery consisting of two gun detachments, and an infantry battalion consisting of four companies, a band, and the necessary staff officers. The commissioned officers are selected from the Senior, the sergeants from the Junior, and the corporals from the Sophomore class. The officers and non-commissioned officers are selected for character, military record, knowledge of the drill regulations, and general aptitude.

UNIFORM.

But one style of uniform is worn, known as the undress or fatigue uniform. It consists of a dark blue suit and is to be worn on all occasions of military duty; it can be procured either before or immediately after being admitted. A detailed description will be furnished on application to the President. Uniforms can be obtained in the vicinity at a cost of from \$12 to \$18.

COURSE OF INSTRUCTION IN MILITARY SCIENCE AND TACTICS.

The course of instruction is both practical and theoretical.

First Year. Practical instruction, three hours a week, 4:30 to 5:30. Practical instruction in infantry drill, school of the soldier, company and battalion drill; extended order and ceremonies; rifle firing at 100, 200, 300, 500, and 600 yards.

Second Year. Practical instruction: Infantry, same as first year; artillery in service of field guns (foot battery), with mechanical movements and saber exercise; signaling; rifle firing, same as first year. Theoretical: Winter term, one hour a week 4:30 to 5:30. Recitations, drill regulations, and manual of guard duty.

Third Year. Practical; same as second year. Theoretical: Service of security and information.

ORGANIZATION OF BATTALION.

1899—1900.

Major.....Fred S. Holsteen
 Battalion Surgeon.....Dr. A. A. Knipe

STAFF AND NON-COMMISSIONED STAFF.

1st Lieutenant and Adjutant.....M. L. Ferson
 1st Lieutenant and Quartermaster.....Hal A. Childs
 Sergeant Major.....R. A. Cook
 Quartermaster Sergeant.....L. P. Sieg
 Color Sergeant.....Dan Fry Miller

COMPANY A.

Captain.....G. F. Harkness
 1st Lieutenant.....J. W. Kindall
 2nd Lieutenant.....C. R. Jones
 1st Sergeant.....G. R. Amin
 Sergeants.....
 { W. O. Coast
 { J. Brockway
 { S. C. Williams
 { J. G. Griffith
 Corporals.....
 { M. Bracket
 { H. G. Huntington
 { R. J. Clearman
 { C. R. Crowell
 { Thos. Cassidy

COMPANY B.

Captain.....E. R. Mitchell
 1st Lieutenant.....C. C. Hetzel
 2nd Lieutenant.....Thomas A. Kingland
 1st Sergeant.....Donald McClain
 Sergeants.....
 { Geo. W. Ball
 { G. E. Remley
 { W. P. McCulla
 { L. O. Rue
 Corporals.....
 { L. M. Butler
 { F. G. Emry
 { A. H. Stork
 { R. C. Williamson
 { C. L. Roguet

COMPANY C.

Captain.....W. E. Beck
 1st Lieutenant.....H. C. Saunders

2nd Lieutenant.....	C. H. Cogswell
1st Sergeant.....	F. C. Drake
Sergeants.....	{ F. Briggs E. M. Clapp E. T. Burrier R. J. Bannister
Corporals.....	{ A. M. Currier A. G. Remley J. F. Kirbey A. R. Hoover H. S. Funson

COMPANY D.

Captain.....	Roy A. Miles Collins
1st Lieutenant.....	A. P. Speers
2nd Lieutenant.....	W. S. Rankin
1st Sergeant.....	C. C. Converse
Sergeants.....	{ E. W. Russell T. D. T. Umberge A. L. Remley Otto Bracket
Corporals.....	{ R. Call A. C. Clapp C. S. Macy R. J. Lynch M. J. Morgan

BATTERY AND SIGNAL CORPS.

Captain.....	W. L. Hoffman
1st Lieutenant.....	O. M. Deems
2nd Lieutenant.....	A. Cass
1st Sergeant.....	P. A. Bond
Gunners.....	{ H. S. Arnold H. A. McCaffree

BAND.

Director.....	O. A. Kuck
Drum Major.....	Chas. Goettach

PHYSICAL TRAINING AND ATHLETICS.

DR. ALDEN ARTHUR KNIPE, DIRECTOR.

The University authorities encourage physical training as acquired in the Gymnasium, in military drill and in out-of-door sports. Under the supervision of the Physical Director this Department is so governed that the necessary physical vigor of the students is looked after in a thoroughly systematic way.

As soon as apparatus is secured every student entering the

University will be entitled to a physical examination by the Director, in which his physical proportions are measured, his strength tested, his heart and lungs examined and information solicited concerning his general health and inherited tendencies. From the data thus procured appropriate exercises are ordered.

Students who are candidates for the various Athletic Teams are required to be examined and certain physical excellence must be attained before they are eligible—no candidate being permitted to compete without having obtained a card from the Director.

A course in Physical Training is contemplated which will include both theory and practice. The Theoretical work of this course consists of illustrated lectures in the following subjects.

Anatomy. Study of muscular action and correct methods of development.

Physiology. Elementary and Experimental. Lectures and demonstrations in the use of apparatus for testing and recording respiratory movements and circulation. Study of the effect of exercise upon these functions. Testing for reaction time, speed, accuracy and quickness in motor responses, etc.

TEST FOR NORMAL VISION AND HEARING.

Physical and Mental Activity. Study of the relations of mind and body in health and disease.

Personal Hygiene. Lectures on sleep, bathing, clothing, diet, and exercise.

Physical Training. Theory and Practice. Application and History of Various Systems.

Physical Diagnosis.

Anthropometry. Study of Physical measurements. Determination of the laws of human proportions.

Development of Children. Growth at various ages. The bearing of these changes upon their mental and moral life.

First Aid to the Injured. Lectures and demonstrations with special course in bandaging.

The use of apparatus for testing and examination, methods of measuring and tabulating given under personal supervision of instructors.

Practical work consists of the following:

Free Movements.

Calisthenics.

Light Gymnastics.

Military Drill.

Gymnastic Games.

Delsarte Movements.

Track and Field Athletics.

Special Exercise on Developing Appliances.

ATHLETIC UNION.

For the encouragement and better management of athletics the students of the University have organized an Athletic Union to which the students of all departments and classes are admitted upon the payment of a nominal membership fee.

The affairs of the Union are regulated by a Board of Control composed of five members of the University Faculties, appointed by the President; two members of the Alumni, and six student members elected by the Union.

The following Rules governing Inter-Collegiate Athletic Contests are those made by the Chicago Conference composed of delegates from the Universities of Chicago, Illinois, Michigan, Minnesota, Northwestern, Purdue, Wisconsin, Indiana and Iowa.

INTERCOLLEGIATE RULES.

ADOPTED NOV. 26, 1897.

1. No one shall participate in any intercollegiate game or athletic sport unless he be a bona fide student doing full work in a regular or special course as defined in the curriculum of his college, and no person who has participated as a college student in any intercollegiate game as a member of any college team shall be permitted to participate in any game as a member of any other college team until he has been a matriculate in such college under the above condition for a period of one year, or has obtained a college academic degree; and in the institutions represented in this conference preparatory students shall not be eligible to membership on the college teams.

2. No person shall be admitted to any intercollegiate contest who receives any gift, remuneration or pay for his services on the college team.

3. No student shall participate in a particular sport upon the team of any college or colleges for more than four years in the aggregate, and any member of a college who plays during any part of an intercollegiate foot-ball (or base-ball) game, does thereby participate in that sport for the year.

4. No student shall participate in any intercollegiate contest who has ever used or is using his knowledge of athletics or his athletic skill for gain. No person who receives any compensation from the University for services rendered by way of regular instruction shall be allowed to play on any team.

5. No student shall play in any game under an assumed name.

6. No student shall be permitted to participate in any intercollegiate contest who is found by the faculty to be delinquent in his studies.

7. All intercollegiate games shall be played on grounds either owned by or under immediate control of one or both of the colleges participating in the contest, and all intercollegiate games shall be played under student or college management, and not under the control of any corporation or association or private individual.

8. The election of managers and captains of teams in each college shall be subject to the approval of its committee on athletics.

9. College foot-ball teams shall play only with teams representing educational institutions.

10. Before every intercollegiate contest the respective chairmen of the athletic committees of the institutions concerned shall submit to each other a certified list of the players eligible under the rules adopted, to participate in said contest. It shall be the duty of the captains of the respective teams to exclude all players from the contest except those so certified.

11. Athletic committees shall require each candidate for a team to represent the university in intercollegiate contests, to subscribe to a statement that he is eligible under the letter and spirit of the rules adopted.

12. No person having been a member of any college athletic team during any year, and having been in attendance less than one college half-year, shall be permitted to play in any intercollegiate contest thereafter until he shall have been in attendance six consecutive calendar months.

COURSES OF STUDY FOR GRADUATES.

It is the aim of the University to furnish facilities for advanced study commensurate with the demand for such work. As the number of graduate students has increased, especially of candidates for advanced degrees, the courses of study have been extended to meet their needs. No set courses of study leading to any of the advanced degrees are provided; each candidate for one of these degrees pursues an independent line of study, in which regular University courses are usually combined with special research work, original in character, laid out with the advice of the professors, and carried out under their direction.

The elastic nature of the elective system as here adopted, renders the more advanced courses in many branches as valuable to the graduate as to the advanced undergraduate. The Seminars, for instance, hold out encouragement and opportunities for a great deal of original study and research. The same thing may be said of a number of the higher courses in the different departments. In the following pages will be found grouped together those courses which are of special interest to graduates. In every case courses intended for graduates only (B) are distinguished from those open also to undergraduates (A.) To the former, undergraduates are admitted only under exceptional circumstances and subject to the discretion of the professor in charge of the work.

LATIN LANGUAGE AND LITERATURE.

A. Courses open to graduates and undergraduates.

Courses 5, 6, 15, 17. See pp. 41, 42, 43. Professor CURRIER.

Courses 7, 8, 9, 10, 11, 12, 13, 14. Loc. cit. Assistant Professor POTTER.

Courses 1 to 4, or an equivalent, are the minimum prerequisite for work leading to an advanced degree.

B. Course open to graduates only.

18. **Seminary in Archaeology.** For 1900-1901 the subject will be the Topography and Archaeology of Rome and the vicinity. Professor CURRIER.

GREEK LANGUAGE AND LITERATURE.

A. Course open to graduates and undergraduates.

6. **Plato's Gorgias, Theaetetus, and selections from the Republic.**

B. Course open to graduates only.

7. **Aristophanes.** Special attention will be given to the purpose and influence of Greek comedy, and to its value as a picture of Athenian life.

GERMAN LANGUAGE AND LITERATURE.

A. Courses open to advanced students and graduates only.

5. **German Seminary.** This course is devoted to the study of special periods of German, of individual authors, or of particular literary movements. For fuller statement see page 45. Professor WILSON.

6. **Middle High German.** Middle High German grammar, with a comparison of Middle High German syntax and New High German syntax, and reading of specimens of the literature. See page 45. Professor WILSON.

7. **Old High German.** A course in Old High German grammar, and reading of selections from the most important monuments of the literature. See page 45. Dr. EASTMAN.

8. **The German Romantic Movement,** with special reference to its social and literary aspects. See page 45. Mr. STURM.

FRENCH LANGUAGE AND LITERATURE.

A. Courses open to graduates and undergraduates.

4. **History of French Literature.** Lectures in the French language. Text-books: Aubert's *Littérature française*; Montaigne's *De l'Institution des Enfants*. Professor VAN STEENDEREN.

8. **Seminary in French Romanticism.** Professor VAN STEENDEREN.

ENGLISH.

A. Courses open to graduates and undergraduates.

6. **Shakespeare.** See Course 6, under English, page 49. Professor ANSLEY.

10. **Seminary in English Poetry.** See Course 10, under English, page 49. Professor REEVES.

11. Browning. See Course 11, under English, page 49. Professor ANSLEY.

12. English Popular Poetry. See Course 12, under English, page 50. Dr. GRIFFIN.

13. Religious Motives in English Literature. See Course 13, under English, page 50. Dr. GRIFFIN.

16. The Theory of Literary Criticism. Seminary. See Course 16, under English, page 50. Professor ANSLEY.

18. Anglo-Saxon Law. See Course 18, under English, page 50. Professor REEVES.

B. Course open to graduates only.

19. Gothic and Old Saxon. See Course 19, under English, page 50. Professor REEVES.

HISTORY.

A. Courses open to graduates and undergraduates.

8. The French Revolution. Lectures. Fall term. Two hours a week. Professor WILCOX.

10. The Nineteenth Century History of Europe. Lectures. Spring term. Two hours a week. Professor WILCOX.

7. Constitutional History of the United States. Lectures. Three hours a week. Professor WILCOX.

11. Seminary in English History. Three terms. Two hours a week. Professor WILCOX.

12. Seminary in United States History. Three terms. Two hours a week. Professor WILCOX.

Special research work is also provided for those who intend to take the master's degree in History as the major study. This work is conducted personally by the Professor of History and, in each case, is along the lines of the candidate's dissertation for the degree.

B. Courses open to graduates only.

11. Seminary in English History. Two hours a week. Professor WILCOX.

This consists, so far as possible, in a critical and comparative study of original sources. Controverted points receive special attention.

12. Seminary in United States History. Three terms. Two hours a week. Professor WILCOX.

POLITICAL SCIENCE.

For a fuller statement of the courses which follow see page 53, under the corresponding numbers.

POLITICAL ECONOMY.

A. For graduates and undergraduates.

3. **Political Economy.** An advanced course. Fall and winter terms, Mon., Wed., Fri., at 11. Professor LOOS.

4. **Public Finance.** Spring term, Mon., Wed., Fri., at 11. Professor LOOS.

5. **Statistics.** Throughout the year, Tu., Th., at 11. Dr. PATTERSON.

7. **Taxation.** Fall term, Tu., Th., at 9. Dr. PATTERSON.

8. **Transportation.** Winter and spring terms, Tu., Th., at 9. Dr. PATTERSON.

B. For graduates only.

9. **Advanced Economics.** Throughout the year. Two hours to be appointed. Dr. PATTERSON.

10. **History of Political Economy and Modern Socialism.** Winter and spring terms, two hours to be appointed. Professor LOOS.

SOCIOLOGY AND POLITICAL PHILOSOPHY.

A. For graduates and undergraduates.

11. **Sociology.** Fall and winter terms, Mon., Wed., Fri., at 9. Professor LOOS.

12. **Municipal Government.** Spring term. Mon., Wed., and Fri., at 9. Professor LOOS.

13. **International Law.** Spring term. Hours to be appointed. Chancellor McCLAIN.

B. For graduates only.

14. **Political Philosophy.** Four hours in the fall and two hours through the winter and spring terms. Hours to be appointed. Professor LOOS.

15. **Graduate Seminar in Sociology.** Throughout the year. Hours to be appointed. Professor LOOS.

GOVERNMENT AND ADMINISTRATION.

A. Courses open to graduates and undergraduates.

8 and 9. **Political Theory and Comparative Constitutional Law.** A study of the more general and theoretical aspects of political phenomena. Fall term: Political Theory. Winter term: Comparative Constitutional Law. Spring term: Papers on special topics in political theory and comparative constitutional law. See above, Politics III, page 60. Professor SHAMBAUGH.

6. **American Political Theory.** A study in the history of political theory in the United States, wherein the writings of

Hamilton, Madison, Washington, Jefferson, John Adams, Clay, Webster, Calhoun, and Lincoln will be read and discussed. Professor SHAMBAUGH.

Throughout the year, Tu., Th., at 9.

10. **Administrative Law.** A comparative study of administrative law in France, Germany, England, and the United States. One term, two hours. Professor SHAMBAUGH.

PHILOSOPHY.

A. Courses open to graduates and undergraduates.

5. **Laboratory Course in Experimental Psychology.** The exercises are so arranged as to familiarize the student with the method, the apparatus, and the results of typical experiments in each of the approved lines of psychological research. Two periods are spent on each problem. During the first the experiment is performed by each individual, the class being divided into groups of two. During the second, the results and the literature on the subject are discussed on the seminar plan. The manual of the course is furnished in mimeograph copies. Dr. SEASHORE and Miss WILLIAMS.

Fall and winter terms, three hours.

6. **History of Philosophy.** A course in Greek, mediæval and modern philosophy. Lectures with assigned reading in the texts of Zeller, Weber, Falckenberg, Erdmann and Windelband. Professor PATRICK.

Throughout the year. Three hours.

12. **Abnormal Psychology.** Hypnosis, sleep, alterations of personality, automatism, hallucinations, and the psychology of the abnormal and defective classes. Lectures with required reading. Dr. SEASHORE.

Spring term. Two hours.

B. Graduate courses.

7. **Introduction to Metaphysics.** Theories of reality with a critical examination of materialism. Professor PATRICK.

Fall term. Two hours.

8. **Philosophy of Theism.** The conception of God in the religions of the Hindoos, Persians, Egyptians, Jews, Greeks in the Christian religion and in modern thought. Final causes. The bearing of evolution upon theism. Pantheism. Professor PATRICK.

Winter term. Two hours.

9. **History and Philosophy of Mysticism.** The chief ancient, mediæval and modern mystics will be studied and the principal

mystic writings will be examined. Vaughan's Hours with the Mystics, Racejac's The Bases of the Mystic Knowledge, and Inge's Christian Mysticism will be used as texts. Professor PATRICK.

Spring term. Two hours.

11. **Experimental Psychology of the Child.** A course in the experimental psychology of school children. The purpose is to give training in the methods of experimental child study by making actual investigation on current problems in the development of mind. Dr. SEASHORE.

Spring term. Four hours.

13. **Advanced Psychology.** A systematic study of the problems of normal, adult, human psychology. Reading, lectures and discussion. Dr. SEASHORE.

Fall and winter terms. Two hours.

14. **Special Research in Psychology.** Original investigations of special problems in psychology. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *University of Iowa Studies in Psychology*. Dr. SEASHORE and Professor PATRICK.

Throughout the year.

PEDAGOGY.

A. Courses open to graduates and undergraduates.

2. **Philosophy of Education.** It is the purpose in this course to set forth the aims of education, and the laws upon which the child's development depends; to treat in some detail the educational doctrines and theories that have become or that promise to become effective in school teaching and administration; and to devote some time to the application of the laws of the child's development to the selection and arrangement of the materials of instruction. Professor McCONNELL.

6. **School Systems.** This course will require of the students an examination of the state and the city school systems of the United States. Lectures and reports. Professor McCONNELL.

7. **Child Study.** In this course the history, literature, and methods of work in child study will be treated. Professor McCONNELL.

Graduate students in these courses will be required to make, in addition to the work expected of undergraduate students, a special study of one or more of the subjects included in the course selected.

B. Courses open to graduates only.

8. **Public School Conditions.** This course will consist of concrete studies of public school conditions, and will be statistical and descriptive. It will be taken as individual work and will be under the direction of Professor McCONNELL.

9. **Elementary Education in Germany.** In this course the student will be required to make a special study of the application of the Herbartian principles in the elementary schools of Germany. The student must be able to read German. Professor McCONNELL.

PHYSICS.

A. Courses open to graduates and undergraduates.

6. **Special Investigation or Research,** to follow Courses 4 and 5, page 66. Professor VEBLEN and Mr. BOWMAN.

7. **Theory of Direct Current Dynamos and Motors.** Professor VEBLEN.

8. **Theory of Electricity.** Direct currents twice a week. Professor VEBLEN. Alternate currents three times a week. Mr. BOWMAN.

9. **Alternate Current Machinery.** Polyphase current machines, twice a week. Professor VEBLEN. The transformer, three times a week. Mr. BOWMAN.

13. **Heat and Thermodynamics.** Mr. BOWMAN.

15. **Seminary.** Systematic and critical reading of physical journals. Meetings every week through the year. Professor VEBLEN.

B. Courses open to graduates only.

The physical laboratory affords opportunity for such special work and research as may be desired for additional minor and major courses. Work may be laid out in any special line for those who wish, and will include both experimental and theoretical treatment of the branches chosen. For those who prefer it a general major course in physics will be arranged by a suitable selection from the different courses offered.

CHEMISTRY.

A. Courses open to graduates and undergraduates.

6. **Theoretical and Physical Chemistry.** This course consists of lectures and laboratory work, and comprises an experimental study of cryoscopic, ebullioscopic, and vapor density methods for the determination of molecular weights, of the speed of chemical reaction, of the coefficients of chemical affin-

ity, and of other problems of like character. Only in even numbered years. Professor ANDREWS.

5. **Advanced Quantitative Analysis.** Professor ANDREWS.

10. **Crystallography.** Lecture and laboratory course in crystallography and crystal measurements. Dr. VON ENDE.

B. Courses open to graduates only.

11. **Research Work.** Organic chemistry. Professor ANDREWS.

12. **Research Work.** Physical and inorganic chemistry. Professor ANDREWS and Dr. VON ENDE.

ANIMAL MORPHOLOGY AND PHYSIOLOGY.

A. Courses open to graduates and undergraduates.

The following courses are offered to graduate students who elect work in morphology as a minor. The completion of undergraduate Course 1, or its equivalent, is a prerequisite.

2. **Comparative Histology.** A general course of laboratory work on the histology of animal tissues and systems of organs. Professor HOUSER and Mr. LAMBERT.

3. **Comparative Neurology.** This is a specialized course for the detailed study of the nervous system. Lectures and laboratory work. Professor HOUSER and Mr. LAMBERT.

4. **Vertebrate Embryology.** A laboratory course, accompanied by a series of lectures, for the study of early developmental stages and the embryology of the chick. Professor HOUSER and Mr. LAMBERT.

B. Open to graduates only.

7. **Research Course.** Facilities for original investigation will be provided for those who elect work in this subject as a major. The specific character of such work will be determined by individual needs and preferences, but, in general, a biological problem will be assigned for independent investigation through the use of refined laboratory methods. Candidates for this work are supposed to have a biological training at least equivalent to that provided by undergraduate Courses 1, 2, 3, and 4. Professor HOUSER.

ZOOLOGY.

A. Courses open to graduates and undergraduates.

7. **Lectures in Speculative Zoology.** Two hours a week. This course is devoted to a presentation of the more prominent theories concerning the origin and evolution of animal forms and a historical review of the position held by the most prominent workers in speculative zoology. Special attention will also

be paid to a study of the habits, instincts, and intelligence of animals. The course will continue through the year. Professor NUTTING.

8. **Thesis.** Equivalent to two terms' work. Advanced work in any group of animals of which the museum contains a sufficient series. Free access to any specimens or books on the museum floor or in the reserve series in the attic is accorded to students doing thesis work in zoology. Professor NUTTING.

B. Courses open to graduates only.

9. An exhaustive systematic discussion of any limited group of animals of which the museum affords sufficient material and the library sufficient literature.

In several groups such as birds, echinoderms, mollusca, crustacea, coleoptera, and coelenterata, the museum can now offer facilities for the most advanced systematic work, both the material and literature being adequate.

10. Special investigation along the line of speculative zoology, e. g., coloration of animals, geographical distribution, variation, natural selection, etc.

GEOLOGY.

A. Courses open to graduates and undergraduates.

3. **Invertebrate Paleontology.** Course 3, described on page 72, is offered to graduate and undergraduate students who have previously taken Course 2. This course can only be taken as a minor by candidates for the master's degree. Professor CALVIN.

4. **Economic Geology of the United States** may be taken on the same terms as 3.

B. Courses open to graduates only.

6. Graduate students who elect geology as a major will be assigned work involving original research in some branch of geology or paleontology. This work may embrace such subjects as describing and mapping the geological formation of some selected area, Pleistocene geology of some country or group of countries, the stratigraphic distribution of the fauna of a given geological formation, the critical study of certain selected geological fauna, the geological and geographical range of certain zoological groups of organisms, or the evidence of evolution in successive geological fauna. Throughout the year, daily. Professor CALVIN.

BOTANY.

A. Courses open to undergraduates and graduates.

Courses 5, 6, 7, 9, and 10, as described on pp. 72 to 75, are open to graduates who may select botany as a minor. The com-

pletion of Courses 1, 3, and 4, as described on pp. 72, 73, or the equivalent, is presupposed in all cases.

B. Courses open to graduates only.

12. **Histology.** The preparation and critical study of material illustrative of the structure of some special group of either sporophytes or spermaphytes, or the critical study of some special sporophytes or spermaphytes, or the critical study of some special organ or tissue as developed in different plant groups. Professor MACBRIDE and Professor SHIMEK.

13. **Physiology.** Practical experimentation in laboratory and field, with the object of solving, so far as may be practicable, some physiological problem as presented in the case of a selected plant or group of plants; or the critical study of the function of some special organ, or group of tissues. Other topics may be found in research relative to the effect of environment, cross and self-fertilization, etc., in the matter of the distribution and differentiation of species, laws of heredity, and kindred problems. Professor MACBRIDE and Professor SHIMEK.

14. **Systematic Botany.** Comparative study of the species of plants found in special geographic distribution; studies of special, natural orders of plants, cryptogamic or phenogamic, with reference to their taxonomy, relationships, distribution, etc.; comparative studies of plants of economic importance, their relationships and history; studies in problems of local forestry, especially as related to conditions found in the Mississippi valley. Professor MACBRIDE and Professor SHIMEK.

GRADUATE COURSES IN MATHEMATICS.

A synopsis of the courses in Mathematics is given on pages 74 to 78 of this catalogue. Of the courses there outlined the following are suited to the requirements of the graduate student:

4. **Advanced Calculus and Differential Equations.**
5. **Theory of Functions and Definite Integrals.**
6. **Elliptic Integrals and Functions.**
7. **Harmonic Functions.**
8. **Differential Equations by the method of continuous groups.**
9. **Determinants and Modern Geometry.**
10. **Analytical Mechanics.**
11. **Theoretical Mechanics.**
12. **Hydromechanics and the Theory of Sound.**
13. **The Method of Least Squares, with applications.**
14. **The Theory of Surfaces, with problems.**
15. **Quaternions.**
16. **The Mathematical Seminary.**

It is to be noted that in each of the above courses a knowledge of the elements of the differential and integral calculus is implied. Graduate students in other lines of work may, however, take as a minor the elementary course in analytical geometry and calculus offered to undergraduates. See Course 3, page 75. The courses in mathematics cannot, in general, be taken *in absentia*.

All graduate students in Mathematics are expected to take an active part in the work of the Mathematical Seminary; and every candidate for an advanced degree will be required to submit a thesis, prepared under the direction of his instructors, representing original investigation in either pure or applied Mathematics.

The Lowden Mathematical Prize. Competition for the Lowden Mathematical Prize of fifty dollars (\$50.00) for excellence in Mathematics, established by Mr. Frank O. Lowden of Chicago, is open to all students who are about to complete in course the work of the Freshman and Sophomore years in Mathematics, the last three terms of such work to be done at this University in the regular classes.

The examination upon which the prize is to be awarded will be conducted by the professor of Mathematics, and will be held in May, not later than the second Saturday preceding the opening of commencement week. Candidates should prepare for examination upon the following subjects: Algebra; theory of equations; plane and spherical trigonometry; analytical geometry of two dimensions; the elements of differential and integral calculus.

The prize will be awarded by a committee the members of which shall be the professors of mathematics, engineering, and physics in the State University of Iowa, and two others to be appointed by the President of the University.

The prize may be equally divided between not more than two candidates, or may be withheld if it shall appear that the work of no candidate is of a superior order of merit.

ADVANCED DEGREES.

Master of Arts, and Master of Science. The degree of Master of Arts, or of Master of Science, will be conferred upon resident graduates on the following conditions:

1. The candidate must be a graduate of this University, or of an accredited University or College.
2. He must have pursued, during one or more years, a course of graduate study at this University, covering one major

and one minor subject. In a two years' course, one major, and two minors, may be allowed. His studies during this time are to be under the immediate supervision and control of the professors immediately concerned, and to be subject to the approval of the Faculty.

3. In all cases, the minor, or minors, must be closely allied to the major subject provided, however, that any candidate, in residence for two or more years, may select a modern language as a second minor for his degree.

4. He must submit a thesis of at least 5,000 words, showing marked attainment in some branch of learning. The subject of this thesis must be announced to the Faculty for approval, not later than the second Friday in December, and the thesis itself must be presented to the examining committee at a date to be set by the professor in charge of the thesis work, not later, in any case, than May 20th of the year in which the degree is expected.

5. He must, at the close of his course, pass a satisfactory examination, both oral and written, conducted by a committee which shall consist of three professors, selected by the Faculty for this purpose.

6. The degree of Master of Arts may be granted only upon the completion of a course mainly literary in character; the degree of Master of Science after one mainly scientific.

7. No graduate student, carrying full work in any professional department of the University, is permitted to receive the master's degree in less than two years after becoming a candidate.

8. Any graduate student in any professional department of the University, doing actual resident work in the Collegiate Department, may become a resident candidate for an advanced degree; but two years of such residence shall be necessary to fulfill the residence requirement of one year imposed by rule 2 above, the residence to be counted only from the date of the application for the advanced degree.

Non-resident graduates may receive the degrees of Master of Arts, or of Master of Science, on complying with the following conditions in addition to or modifying those enumerated for residents. After Oct. 1, 1900, no candidates *in absentia* will be accepted and by June, 1903, all existing candidacies *in absentia* will expire.

1. The candidate will be required to outline a course of study, comprising a major and one allied minor subject, which

must be approved by a committee of two or more professors named by the Faculty to pass upon it.

2. He shall at the close of each academic year present to the Faculty a report, which should constitute a complete synopsis of the year's work, naming topics studied and authors read. These annual reports are expected to be specific and comprehensive.

3. His graduate studies must extend over three years; although in exceptional cases, where the candidate devotes a large part of his time to study, a shorter course, but in no case less than two years, may be accepted.

4. Candidates for the master's degree who have graduated elsewhere are required to spend at least one year in residence at this University.

Civil Engineer and Electrical Engineer. Graduates from the engineering courses receive the degree of Bachelor of Science in Civil Engineering. The degree of Civil Engineer or Electrical Engineer will be conferred on graduates who have practiced the profession at least three years, and who have submitted an approved thesis, and passed a satisfactory examination.

Doctor of Philosophy. The degree of Doctor of Philosophy will be granted under the following conditions:

I. Prerequisites.

1. The candidate must have received the bachelor's degree either from this institution or from some other of equal rank.

2. He must present evidence of having completed a satisfactory amount of undergraduate work in the subjects proposed for investigation for this degree.

3. He must possess a knowledge of French and German at least sufficient for purposes of research.

II. Conditions of candidacy.

1. At least three years of graduate study will ordinarily be required. Of these two must be in residence, and the last year prior to receiving this degree must be spent at this University.

2. In making formal application for this degree the candidate shall select one major study and one or two minors; the minor study or studies shall be closely allied to the major and shall be such as with it to constitute but one single field of research.

3. The application of the candidate setting forth the line of research proposed shall be approved and endorsed by the professor or professors under whose direction it is proposed to prosecute the work.

III. Dissertation.

1. On completion of this work the candidate shall submit to the Faculty a formal dissertation which shall not only exhibit evidence of original research but shall in itself be a contribution to the sum of human knowledge.

2. The dissertation must be in acceptable literary form; although its acceptance will depend chiefly upon the subject matter.

3. The subject of the proposed dissertation must be submitted to the Faculty not later than the last Friday in September of the year preceding that in which the degree is expected; and a copy of the dissertation, printed or type-written, must be in the hands of the Secretary of the Faculty not later than the 20th day of May of the year in which the degree is expected. In case the dissertation offered is accepted by the Faculty and the candidate passes satisfactorily the examinations, provided for in the next section following, he shall, prior to receiving his degree, deposit with the librarian of the University twenty-five printed copies of the dissertation so accepted.

IV. Examinations.

1. At such time as may be agreed upon by the candidate and the professors in charge of his work, he shall pass an examination, both oral and written; the examination to be conducted by the professors immediately concerned, the written privately, the oral in the presence of the Faculty. For purposes of this examination five members of the Collegiate Faculty shall constitute a quorum.

MATERIAL EQUIPMENT.

LABORATORIES.

CHEMICAL LABORATORY.

THE chemical laboratory occupies two stories in the Chemical Building. This space is divided into twenty-five rooms, designed in such a way as to afford facilities for the prosecution of a wide range of chemical work.

The general laboratory is a room 100 feet long by 27 feet in minimum breadth, lighted from one side only by ten large windows. In this and all other rooms of the building provision has been made for perfect ventilation by the construction of numerous air flues. The building is heated by steam, which will also be freely used for chemical purposes, as for drying-ovens, distillation, etc.

The lecture hall is built in amphitheater form with raised seats. It will accommodate nearly two hundred students, every one of whom can clearly see the lecture table and any experiment that may be performed there, even from the most distant part of the room.

The size of the building on the ground is 150 x 105 feet. In all the rooms cross lights have been avoided, and in every respect the designer and the architect have spared no pains to meet every reasonable demand in the construction of a thoroughly modern and substantial structure adapted as perfectly as means would admit to its special uses.

A storage battery and dynamo in connection with a gas engine furnish the electricity to the various laboratories for electrolysis and other uses. Especial facilities in the way of apparatus are provided for the study of physical chemistry.

Through the liberality of Mr. F. W. Shanutijs and Professor J. W. Richards, both of Lehigh University, and of Mr. C. A. Buck of the Bethlehem Steel Company, the Chemical Labora-

tory has been presented with valuable collections illustrative of the metallurgy of aluminum, zinc and iron. The numerous specimens comprising these collections are accompanied by full analytical data.

PHYSICAL LABORATORY.

The physical laboratory occupies the first floor and basement of the North Building, with an available floor space of more than 8,000 square feet.

In the basement is the large engine and dynamo room containing a gas engine which drives a shaft twenty feet long. To this shaft are belted the dynamos, of which there are six of from one to ten horse-power capacity, and representing several types. Here also is a cable switch-board, meters, lamps, and other apparatus. In this room, and driven by the same engine, are three lathes, a planer, drill-press, forge and the usual tools for working metal. In the battery room are some 50 accumulators of different varieties. A large and commodious photometer room is supplied with a complete Kruess photometer. One basement room has been equipped as an electrical laboratory. Another room is supplied with a cabinet-maker's bench and a few wood-working tools.

On the floor above are eight rooms. The lecture room, with seats for some 70 students, is supplied with water and gas and with wires from the dynamos and the accumulators. The windows can be easily darkened, and there are conveniences for making projections by sunlight or by electric or other artificial light. A large and well lighted room is devoted to the uses of a general laboratory, especially in the line of mechanics, and contains a number of balances, air-pumps, a cathetometer, and a number of other measuring instruments. Another large room contains much of the apparatus for electrical testing. Here also is the special physical library with the journals taken for the laboratory. Three smaller rooms are given respectively to heat, light, and magnetism, and are well equipped with apparatus. There are also two offices, for the professor in charge and the assistant professor.

The laboratory is fairly well supplied with lecture apparatus; and among the instruments of precision are many of the best and finest to be had. The equipment is especially full in mechanics, optics, and electricity. Most of the apparatus has been purchased in recent years, and has been selected with great care; and some has been constructed for particular uses in this laboratory.

LABORATORIES FOR ANIMAL MORPHOLOGY AND PHYSIOLOGY.

The laboratories for animal morphology and physiology occupy the west half of the first floor of the Natural Science Building, together with a portion of the basement. They are supplied with water and gas throughout, and are lighted by twenty windows.

The laboratory for the course in general morphology receives light from the north. It is furnished with heavy oak, slate-topped tables, particularly adapted to the anatomical and microscopical requirements of the work. The tables will accommodate thirty students at one time.

The equipment of this laboratory includes thirty compound microscopes, the requisite accessory optical apparatus, a series of over seven thousand microscopical slides, a large number of anatomical preparations, charts and models, and the numerous pieces of minor apparatus, glassware, etc., incident to general biological work.

The laboratory for the several advanced courses is lighted from the west and south. It is furnished with tables and reagent racks designed to meet the special requirements of the work pursued here. A smaller room opening from the main one supplies the conditions desired for apparatus of constant temperature. The equipment of this laboratory embraces special microscopes, sliding microtomes of approved pattern, a Minot automatic microtome for serial sectioning, a large Lillie water bath for paraffin imbedding, a laboratory incubator for work in embryology, a thermostat of ample size, a complete stock of biological reagents, sets of bottles for each student, a large assortment of glassware, and various pieces of physiological apparatus.

Opening from the main laboratories are smaller rooms available for those pursuing special lines of investigation. The basement laboratory is utilized for aquaria, anatomical tanks, animal cages and appliances for various lines of special work.

A reference library in English, French, and German is kept in the laboratories, and is accessible at all times during working hours. A subject index on the card catalogue system renders the literature more readily available.

LABORATORIES FOR GEOLOGY AND PALEONTOLOGY.

The material for illustrating the work in geology and paleontology embraces:

1. The museum collection of rocks, clay, building stones, minerals, and fossils.

2. A large series of maps, charts, lantern slides, photographs, and geological models.
3. A lithological lathe for making rock sections, or sections to illustrate the structure of ancient forms of animals and plants.
4. Petrographical microscopes.
5. Photographic apparatus, including a large photomicrographic camera.
6. A large series of negatives from which the students make prints to illustrate their permanent note books.
7. Geological phenomena illustrated within easy reach of Iowa City.

The surrounding neighborhood affords many instructive examples of phenomena of interest to the student of geology. At the same time it offers unexcelled opportunities for field work in mapping, making geological sections, tracing strata from one exposure to another, and making paleontological collections. The Pleistocene deposits are of especial interest. The available material is not only sufficient to illustrate the ordinary undergraduate courses in geology, but advanced students will find enough to occupy their time with profit for two or more years.

BOTANICAL LABORATORY.

This laboratory is located on the second floor of the Natural Science Building, and is in direct communication with the herbarium. It is supplied with heavy oak, slate-topped tables, furnished with drawers and cases for the instruments used in microscopic work, and is arranged to accommodate thirty students at one time. Thirty compound microscopes, with necessary accessories, section-cutters, etc., are at the disposal of the students.

Connected with the main laboratory are private laboratories for students pursuing special lines of investigation. Two of these are furnished with special microscopes, a photomicrographic camera, and apparatus for investigation in vegetable physiology.

A fine stereopticon, the joint property of this and the geological laboratory, is a recent addition to our general equipment. These laboratories are well lighted, and in every way adapted to satisfactory work.

PSYCHOLOGICAL LABORATORY.

The new psychological laboratory on the second floor of the new collegiate building will be occupied during the present year (1900). It includes, besides the lecture rooms, offices and sem-

inary room of the department of philosophy, five commodious laboratory rooms, a work shop, and a dark room. The dark room may also be used for experiments in sound and hearing and has been constructed to secure the greatest possible freedom from noise. The laboratory rooms are supplied with water, gas and electricity, complete electrical connections being made between the battery room and all other laboratory and lecture rooms.

The laboratory equipment includes: (1) Apparatus, charts, preparations and models for use in lecture courses, (2) a complete set of apparatus for a year's laboratory course in experimental psychology, and (3) apparatus employed in special research.

The following is a partial list of apparatus. For general use: A Bausch and Lomb microscope, a spark chronoscope with accessories, a special graphic recording apparatus, the Zimmermann kymograph with rhythm and time-sense apparatus, a pendulum chronograph, exposing shutters, chronometers, standard forks, batteries, motors, and induction coils. For the study of motor processes: New discriminative action apparatus, sorting apparatus, thought and action apparatus, dynamometers, ergographs, spirometer, pneumograph, sphygmograph, and a new stroboscopic apparatus for the measurement of pitch in vocalization. For the lower senses: Olfactometers, algometers, several series of weights and scales, temperature finders, and apparatus for the production of gradual changes in weight and pressure. For hearing: Audiometers, sound pendulum, Koenig cylinders, Galton whistle, Appunn's reed, siren, and several sets of tuning forks and pipes. For sight: Various color mixing outfits, sixty charts illustrating color phenomena, visual illusions, etc., spectroscope, tachistoscopes, pseudoscopes, stroboscopes, Peulmeters, planimeter, tests for color blindness, eye muscle apparatus, lenses, vacuum tubes, and dark chamber.

The study of the nervous system is illustrated by means of a comprehensive series of charts, preserved specimens, microscopic slides, and models, including Auzoux's dissectible model of the brain.

The work shop is provided with work bench, lathe, all necessary tools, mimeograph, dissecting apparatus, etc.

ASTRONOMICAL OBSERVATORY.

The students' astronomical observatory is conveniently located on the University campus. It is furnished with a five-inch equatorial telescope by Grubb of Dublin, having circles, driving clock, position micrometer, helioscope, and solar and stellar spectroscopes; a transit instrument by William Wuerdemann of

Washington; a prismatic sextant and artificial horizon by Pistor and Martins of Berlin; clock chronometer; chronograph, etc.

The mathematical and astronomical library comprises over one thousand volumes, including many rare and valuable works. The periodical literature devoted to these branches of science is also well represented.

CIVIL ENGINEERING LABORATORIES AND DRAUGHTING ROOMS.

The hydraulic laboratory is a room having a floor space of 575 square feet. The equipment for 1899-1900 will include the necessary tanks with standard orifices, tubes and weirs for free and submerged flow, hook gauge, water meters of various kinds, pressure gauges, and other necessary appliances for illustrating hydraulic principles; also a Price's pneumatic current meter for field gaugings.

The cement laboratory contains a Riehle 1,000 pound cement tester, a Fairbank's automatic shot-stop cement tester of same capacity, briquette making machines of the Sims and S. U. I. types, and all necessary tanks, mixing sinks, molds, etc., for making complete tests of cement.

The iron, steel, and wood laboratory contains an autographic testing machine, a 100,000 pound Riehle machine, a standard Riehle's abrasion cylinder for testing paving brick and an engine which furnishes the power for their operation.

The draughting rooms are well lighted and equipped with all necessary appliances.

The department is provided with a field equipment ample to permit full and complete practice in the different kinds of surveying; this equipment consists of a vernier compass, a railroad compass, a solar compass, levels and transits, with stadia, gradienter and Saegmuller solar attachment, also a plane table of the latest approved form with best telescopic alidade and all necessary attachments, together with all the rods, flags, chains, tapes, etc., that are necessary to equip fully the various classes and divisions in surveying without interfering with each other in their work.

The engineering library consists of over 500 volumes of the standard works on the various engineering subjects; these books are selected from and are a part of the general library, but are arranged in a convenient room adjacent to the drawing rooms, and are freely used by the engineering student. All the best engineering journals and periodicals are received, bound, and kept on file.

Each engineering student is eligible for membership in the Engineering Society. This society meets each week, and papers upon engineering subjects are prepared and read by the students.

An engineering journal, *The Transit*, is published annually by the University. It is edited by the members of the Engineering Society, and contains the results of original research in engineering problems by undergraduate students and alumni.

NATURAL HISTORY COLLECTIONS.

GEOLOGICAL COLLECTIONS.

1. A large series of minerals, building stones, fossils, earths, etc., collected chiefly in the prosecution of the State geological surveys, between the years 1856 and 1870. These collections are annually increasing by contributions from various sources.

2. The Calvin collection of American and European fossils.

3. A collection of cretaceous cycads from the Dakota sandstone of the Black Hills.

4. Recent extensive collections illustrating the cretaceous faunas and economic geology of the Black Hills.

5. A collection illustrating general economic geology.

A beautifully preserved skeleton of a Mosasaur, *Platecarpus*, has lately been added to the geological collections through the generosity of the Davenport Alumni Association.

HERBARIUM.

The herbarium is located in one room on the second floor of the Natural Science Building. It contains:

1. A very large and constantly increasing collection of fungi, chiefly saprophytic, from all parts of North and Central America. To be classed here is also a large collection of the myxomycetes from all parts of the world.

2. A large collection of ferns and mosses from both hemispheres, including an especially complete series from tropical America.

3. A collection of lichens, representing most of the species of the United States.

4. A collection of many thousand flowering plants, representing very fully the flora of North America, and especially rich in Central America and European forms. The number of plants in the herbarium exceeds 200,000.

5. A collection of seeds and dry fruits including cones, representing the flora of North America chiefly, but containing also much material from the tropics.

6. A collection of the principal woods of the United States.

The herbarium collections, thanks to friends and collectors in various parts of the world, are steadily increasing in extent and value. It is hoped that private collectors will hereafter as heretofore find the University a proper place for the deposit and care of collections of plants.

In 1898 botanical expeditions were sent to various sections of the United States. The principal one of these was in charge of Mr. T. E. Savage, and was employed in Oregon and Washington; Professor B. Shimek spent some weeks in similar work in Mississippi, and Mr. P. C. Myers in various part of Iowa.

Special thanks in this connection are also due to E. W. D. Holway, A. P. Morgan, C. L. Smith, T. E. Lenoeker, T. J. Fitzpatrick, F. Reppert, T. M. Holsinger, H. F. Wickham, Paul Bartsch, B. Fink, R. I. Cratty, J. E. Cameron, C. C. Stover, L. M. Cavanagh, Ellen Dubal, T. E. Savage, P. C. Myers, C. W. Irish, W. G. Farlow, E. Bethel, Katharine Vale, Columbian Museum, H. L. Jones, S. Calvin, Mae Webber.

MUSEUM OF NATURAL HISTORY.

The museum of natural history has attained a rank second to none in the Universities of the West and is daily becoming more valuable through donations of material by friends of the University.

By the generosity of the collector, the Hornaday collection of mammals and birds has become the property of the University. This collection contains many rare forms of mammals and birds, and is particularly rich in typical exotic forms from India and Australia.

Mr. D. H. Talbot of Sioux City has donated to the University his extensive collection of natural history specimens and minerals. This collection contains many thousand specimens, being especially rich in mammals, birds, and anatomical preparations.

During the last twelve years, expeditions for zoological explorations in the interest of the University have visited the following regions: Bahama Islands, Bay of Fundy, Rocky Mountain region, Pacific coast, Alaska, mountains of Tennessee, the Winnipeg country, Lake Athabasca, Great Slave Lake, the Arctic coast, Siberia, Cuba, Florida Keys, Atlantic coast, British West Indies, and the Bay of Naples.

More than half of the natural history collections is included in the *reserve series* which has been rearranged and labeled with the intention of making the material of the utmost practical use to students of natural history.

A library of reference for the use of students of zoology is placed on the museum floor, and a free use of all the material in the various collections is encouraged, for which purpose a cheerful and convenient study room has been provided for the use of students and specialists.

ZOOLOGICAL COLLECTIONS.

1. **Mammals.** A large series of mounted specimens is now on exhibition, the great majority being rare and valuable foreign species, including a series of marsupials, which surpasses anything of the kind west of the Alleghanies.

Besides the Hornaday collection, the museum contains a large number of native mammals, about forty specimens being from the Pacific coast. A good series of the larger mammals of North America has been secured through the kindness of Mr. D. H. Talbot, and the efforts of Dr. Frank Russell, who returned from the far North with an exceptionally fine series of the large mammals of that region, including five good specimens of the musk ox.

2. **Birds.** The ornithological material in the museum now embraces about 11,000 specimens, about 1,000 of which are exhibited in the mounted series, the remainder being included in the study series for the use of students and specialists.

Besides a large collection of native birds, containing nearly all the species found in Iowa, the following collections are noteworthy:

The Hornaday collection of birds, containing one hundred and twenty-five specimens, nearly all of which are exotics, and many, such as the ostrich and emu, of great value.

The Bond Collection of birds of Wyoming, donated together with a large collection of Iowa birds, by Mr. Frank Bond of Cheyenne, Wyoming.

The Harrison collection of British game birds and birds of prey, a large and valuable series, donated by John Harrison, Esq., of England.

The Talbot collection of American birds, embracing thousands of specimens, mostly from the Mississippi valley.

A collection of 500 birds from the N. W. Provinces of British America, made by the Curator, Dr. Frank Russell, and Prof. A. G. Smith.

A collection of about 600 specimens of birds from the Winnipeg country, Great Slave Lake, Athabasca Lake, the Mackenzie River, and the Arctic coast, made by Dr. Frank Russell.

The Curator has donated his study series of over 800 bird skins from North and Central America, and the Bahama Islands.

3. Reptiles. The alcoholic collection of reptiles has received many important additions, among which may be mentioned a number of specimens from India, donated by Rev. A. Loughridge, and many native specimens presented by students. Ex-Regent B. F. Osborn has donated his large collection of alcoholic specimens, which consists principally of reptiles, thus nearly doubling the series of these forms.

4. Fishes. Professor B. Shimek has presented the museum with his entire collection of fresh-water fishes, of which the museum now has seven hundred specimens, besides a number of marine forms.

A collection of 135 species of the fresh-water fishes of Central and Western North America, has been donated to the University by the United States Fish Commission.

5. Insects. Assistant Professor Wickham is now engaged in assorting a large series of the coleoptera and lepidoptera of North America, which he has generously donated. All of the foreign coleoptera in this large collection are now the property of the museum.

6. Marine Invertebrates. A collection consisting of several thousand specimens of crustaceans, mollusks, star fishes, corals, sponges, etc., has been supplemented by a valuable series consisting of several hundred alcoholic specimens, many of which are the gift of the United States Fish Commission.

The alcoholic collection has been enlarged by marine forms collected during two expeditions to the Bahamas, Cuba, and the Florida Keys, and thousands of specimens have been added by collections made in the Bay of Fundy by Professors Calvin and Nutting.

A car load of marine specimens was secured by the Bahama expedition in 1893. This collection contains a large number of deep-water forms, thus giving the University special advantages in the matter of marine materials for exhibition and study.

A valuable series of marine forms of the more fragile and delicate kinds, such as medusæ, sea-anemones, etc., has been secured from the Stazione Zoologica at Naples, where the most superb preparations of these beautiful forms are made.

7. Terrestrial and Fresh Water Mollusca. The Shimek collection of land and fresh-water shells, embracing nearly all the species known to occur in Iowa, together with many exotic species.

8. Osteological Preparations. A series of mounted skulls and skeletons, illustrating the osteology of typical series of vertebrates, is exhibited, and is of the greatest value to students of

comparative anatomy and zoology. The skeleton of a large whale (*Balaena biscayensis*) was secured in 1898.

9. Ethnological Material, illustrating the handiwork of the Mound Builders, Pueblo Indians, Zunis, Moquis, Acomas, Mojaves, Crees, Dog Ribs, Metis, Kosmolliks, Piegans, Tchukschees, and Navajos, together with skulls and other remains of the ancient and modern inhabitants of America.

Mr. D. H. Talbot of Sioux City has added very largely to this department of the museum. Dr. Russell has been active in securing ethnological specimens illustrating the life and manufactures of the Crees, of other northern tribes of Indians, and of the Esquimaux.

Mr. H. M. Griffith of the Fifty-first Iowa Volunteers brought back from Luzon a valuable collection which he has generously donated to the museum.

GENERAL INFORMATION.

LEGISLATIVE APPROPRIATIONS.

The last General Assembly continued for another five years the one-tenth of a mill tax for building purposes. The annual income of this tax, amounting to about \$55,000 will afford the university opportunity for material growth. The General Assembly also enlarged the general support fund of the university by a permanent appropriation of \$50,000 a year, making with the preceding permanent appropriations an income from this source for the university of \$125,000 a year.

The university enjoys the proceeds of the invested funds and lands originally given by the United States, and supplemented by the tuitions paid by the students. The present financial outlook of the university is an occasion for gratitude on the part of its friends, and enables the regents and faculty to make enlarged provision for work over wide fields.

THE LIBRARY.

The University Library contains about 55,000 volumes, beside a large number of unbound pamphlets. About 200 periodicals are taken by the library in addition to the publications of a large number of scientific societies. Many of the newspapers of the state are on file in the reading room.

While the library is designed especially for the use of the officers, resident graduates and students of the several depart-

ments of the University, other persons may have the privilege of consulting the books.

The library is open daily, except Sunday, from 8 A. M. to 12 M. and from 1 P. M. to 5 P. M.

NEW AUDITORIUM, ARMORY AND GYMNASIUM.

The regents have determined to devote the first proceeds of the five years' one-tenth mill tax for building purposes, to the erection of an assembly hall, armory and gymnasium.

LITERARY AND SCIENTIFIC SOCIETIES.

The literary and scientific societies maintained by the Faculty and the students of the University afford an important means of general culture, scientific research, and literary and forensic training, and thus form a valuable element as well as an attractive feature in University life.

Of those conducted by the Faculty, the BACONIAN has for its object discussion of scientific questions, and the POLITICAL SCIENCE CLUB discusses questions in history, politics, economics, law, education, and ethics, while the WHITNEY SOCIETY is devoted to the field of language and literature and the methods of teaching these subjects.

The PHI BETA KAPPA SOCIETY elects to membership, on the basis of high scholarship, a certain number from the graduating class who have completed the Classical or Philosophical Course.

Among the purely literary societies are the TABARD, POLYGON, and IVY LANE. The IRVING INSTITUTE, the ZETAGATHIAN SOCIETY, the PHILOMATHEAN SOCIETY for young men, and the HESPERIAN SOCIETY and the ERODELPHIAN SOCIETY for young women, hold weekly meetings for improvement in debate, oratory, writing, and declamation.

There are also in the institution societies connected with the Engineering, Chemical, Law, and Medical Departments.

MUSICAL ORGANIZATIONS.

The University Glee Club, the Minstrels, the Military Band, the Mandolin Club, etc., afford opportunity for musical training and furnish entertainments.

THE LECTURE BUREAU.

The Zetagathian and Irving Societies unite to form a Lecture Bureau which furnishes a series of literary and musical entertainments.

THE ORATORICAL LEAGUE.

This association is made up of members of the Zetagathian, Irving and Philomathean Societies, and is a member of the Northern Oratorical League, consisting of Oberlin College, Northwestern University, and the Universities of Wisconsin, Michigan, Chicago, and Iowa.

THE DEBATING LEAGUE.

This organization composed of the Zetagathian and Irving Societies, carries on systematic training in debating through private practice and public contests. It has had public debates with the Universities of Minnesota and Chicago for some years, and will this year meet the Universities of Minnesota and Wisconsin.

CHRISTIAN ASSOCIATIONS.

The Young Men's and Young Women's Christian Associations are the center of the religious life of the University and active factors in all forms of moral and Christian work properly within the scope of such organizations. All students of good moral character are invited to membership either active or associate. Through the exertions of these associations, Close Hall has been erected, mainly from funds contributed by the Faculty, students, and alumni of the University, and the citizens of Iowa City. It is a spacious and convenient building, containing a large assembly hall, gymnasium, reading rooms, reception rooms, and bath rooms. It is extensively used for the meetings of the associations, as well as for the social, literary, and class gatherings of the students.

Through the generosity of Hon. T. S. Parvin the social room of the Y. W. C. A., has been finely fitted out with furniture, cabinet, and pictures, as a memorial to his wife and daughter. A similar room for the Y. M. C. A., has been suitably furnished by Mr. W. D. Cannon, Jr., of Iowa City.

The Associations strive to be useful to all students in every feasible way. Members meet new students at the trains, aid them in securing suitable rooms and boarding places, hold receptions at the opening of the year and on various occasions, maintain an employment bureau, and issue for free distribution a Student's Handbook containing information of interest and value to the whole student body. The General Secretary is glad to be helpful to students on all occasions.

HOSPITALS.

The two Hospitals connected with the University afford the best care and treatment for students seriously ill. Provision for free beds for students is commended to the attention of generous friends of the University.

UNIVERSITY PUBLICATIONS.

Natural History Bulletin. The laboratories of natural history inaugurated in 1888 the publication of bulletins for the purpose of preserving a record of the work prosecuted along the lines of botany, geology, and zoology. Four volumes have thus far appeared in sixteen numbers, and material for the fifth volume is ready for publication. This may be expected during the next eighteen months. The numbers have a large circulation and are sent *gratis* to all correspondents from whom the University receives an equivalent, either in publications or material. To others the price is 50 cents a number. Address the Secretary of the University.

The Transit. An engineering journal, *The Transit*, is published annually by the University. It is edited by the members of the Engineering Society, and contains the results of original research in engineering problems by undergraduate students and alumni.

Studies in Psychology. This is an annual publication devoted to experimental psychology, begun in 1897. It contains the results of original research by the students and instructors in the psychological laboratory.

Bulletin of the Historical and Linguistic Sciences. It contains the reports of original work of the professors and instructors in the departments represented.

Documentary Material Relating to the History of Iowa. These publications contain documentary material illustrative of the history and politics of the commonwealth of Iowa. The series is edited by the professor of government and administration.

STUDENT PUBLICATIONS.

The Vidette-Reporter. A tri-weekly newspaper.

The Quill. A weekly literary publication.

The Hawkeye. A University annual published by the Junior class.

UNIVERSITY EXTENSION.

The University recognizes in the University Extension movement an agency of great value in education. It invites correspondence from communities which may desire to organize lecture courses on literary and scientific subjects, and will to

the extent of its ability meet the desires of these communities. Lecture courses covering a wide range of subjects are offered by members of the University Faculties. Printed matter explaining the work offered by the University, including syllabi of lecture courses, is published by the University, and can be secured by addressing the Director of University Extension.

PRIZES.

PICKARD PRIZE.—A prize of \$20 was offered last year by Dr. J. L. Pickard for the encouragement of extempore speaking to the student in political science who was awarded first rank in competitive extempore debate. A prize of the same value is again offered for this year. The competitive debate will take place early in June.

LOWDEN PRIZE.—Frank O. Lowden, Esq., of the class of 1885, offers prizes of the value of \$25 each for excellence in Latin, in Greek, Mathematics, Botany and Geology.

MAYER PRIZE.—Mr. Max Mayer of Iowa City has established a prize of the annual value of \$25 for excellence in athletics. The details as to the special matters of competition and the methods of awarding the prize will be publicly announced at the beginning of the year 1900-1901. This prize is open to students of all departments of the University.

THE LOCAL ALUMNI ASSOCIATION PRIZE.—An annual prize of free tuition, \$25, is offered to the Freshman from Johnson County who passes the best special examination set for this purpose.

MORGAN PRIZE.—A cup of the value of \$25 is offered annually by Mr. R. E. Morgan of Iowa City for the best record made in football kicking. The competition is open to all students of the University.

LARRABEE PRIZES.—Mrs. William Larrabee offers three prizes of \$25 each for excellence in scholarship in Botany, Geology and Zoology.

OLD ENGLISH PRIZE.—The Early English Text Society of London offers one of its texts for excellence in Old English.

A citizen of Iowa City offers a copy of Gray's Field Manual for the best work in the Botany of the spring term.

STUDENTS AND CIVIL AUTHORITIES.

The relations of students to all laws and to city ordinances is precisely the same as that of other residents of the city. The University grounds are as completely under the jurisdiction of the civil authorities as any other part of the city.

MEANS OF MORAL AND RELIGIOUS CULTURE.

Besides the opportunities offered by the Christian Associations, and the positive influence exerted by them, the churches of the city, in which the members of the Faculty are a large factor, take a deep interest in the students of the University and heartily welcome them to their public services and to a share in their religious activities and social life. The churches of the city are the Baptist, Christian, Congregational, German and English Lutheran, Methodist Episcopal, Presbyterian, Protestant Episcopal, Roman Catholic, Unitarian, and Church of God.

PHYSICAL TRAINING AND ATHLETICS. .

The University authorities encourage physical training as acquired in a gymnasium, in military drill, and in the exercises and sports in the athletic park, but only in such amount and of such character as is compatible with, and promotive of, the higher objects of the University. Intercollegiate contests are allowed, but under conditions as to membership and organization of teams, and leaves of absence determined by the Faculty, on report and recommendation of the Faculty committee on athletics.

In addition to this committee there is an Advisory Board composed of four students and three members of the Faculty, to which are committed the general supervision and control of athletic affairs. The University is a member of the Iowa Inter-Collegiate Athletic Compact, and the Faculty requires that the rules of the Compact, a copy of which appears elsewhere, shall be strictly complied with.

Athletic Park. This field contains about ten acres in the immediate vicinity of the University grounds on which have been constructed a track for running and bicycling, tennis courts, baseball and football fields, and a grand stand.

Gymnasium. In connection with Close Hall is an excellent gymnasium, equipped with suitable apparatus, lockers, baths, etc. This is under the direction of a competent instructor, who organizes classes for both young men and young women.

NEW COLLEGIATE HALL.

This building now in process of erection will be 120 x 260 feet, three stories and basement in height, and will contain ninety-two recitation rooms, seminary rooms and offices, waiting room for gentlemen, ladies' waiting room, and a general lecture

room having a seating capacity of 250. Its style is Colonial which harmonizes with the Central Building (Old Capitol). It will be built with Bedford stone, fireproofed throughout, lighted with gas and electricity, and equipped with a complete system of heating and ventilation.

The contract calls for the completion of Collegiate Hall in September, 1900. It will be occupied by the Departments of English, French, German, Greek, Latin, History, Political Science, Pedagogy, Government and Administration, Psychology and Philosophy, and Mathematics.

In addition to ample lecture rooms, each chair will have an office, and a Seminary room for the use of advanced students working under the direction of the professors in charge, and for the chair of Psychology there will be a large and well equipped laboratory.

NEW HEATING PLANT.

During the summer of 1900 there will be erected a new heating plant for all the buildings on the campus.

EXPENSES.

There are no dormitories and no commons connected with the University. Boarding and lodging in private houses can be obtained for from \$3 to \$5 a week. Clubs are also formed, in which the cost of living is from \$1.50 to \$2.50 a week. Room rent varies from 50 cents to \$1.50 for each student a week.

By an order of the board of regents, the tuition fees must be paid strictly in advance, at the time of matriculation or registration.

The expense for tuition is as follows:

Collegiate Department, \$25 per annum, payable, \$10 at the beginning of the first term, \$10 at the beginning of the second term, and the balance at the beginning of the third term. For one or two terms the fee will be \$10 each.

Provision has been made by the regents for reduction of tuition, or free instruction in the collegiate department for absolutely impecunious students. Information may be secured upon application to the President. The certification of three county officers as to the need of the student is the essential requirement.

Each candidate for graduation will be required to pay a fee of \$5.

A fee of \$10 is required of all candidates for the Master's degree, for the degree of Civil Engineer, or for the degree of Doctor of Philosophy.

Ample facilities are afforded in the city for instruction in bookkeeping, stenography and type-writing, in studies preparatory to the University, the High School, the Academy, and by private instructors.

SELF SUPPORT.

While it is impossible for the university to guarantee that any student will be able to earn his way through college, in whole or in part, it is just to state that it rarely happens that a student needing to do this fails to secure employment of some kind. Iowa City is a city of 10,000 inhabitants, friendly to the university, and glad to give work to deserving students. The university faculty interests itself to aid these students in finding employment, and the Y. M. and Y. W. C. A. have established a free labor bureau which is at the service of students. The associations make a canvass of the city and find work and suitable lodging and boarding places.

The President and Deans seek at all times the confidence of impecunious and deserving students, and heretofore have been able to give them counsel by which students found the way to remain in the university.

SUMMER SESSIONS.

- GEORGE E. MACLEAN, PH. D., LL. D.,
President.
- THOMAS HUSTON MACBRIDE, A. M., PH. D.,
Professor of Botany.
- GEORGE THOMAS WHITE PATRICK, PH. D.,
Professor of Philosophy.
- CHARLES BUNDY WILSON, A. M.,
Professor of German Language and Literature, and Secretary of the Col-
legiate Faculty.
- ANDREW ANDERSON VEBLEN, A. M.,
Professor of Physics.
- LAENAS GIFFORD WELD, A. M.,
Professor of Mathematics.
- CHARLES CLEVELAND NUTTING, A. M.,
Professor of Zoology.
- JOSEPH JASPER MCCONNELL, A. M.,
Professor of Pedagogy.
- WILLIAM CRAIG WILCOX, A. M.,
Professor of History.
- BENJAMIN FRANKLIN SHAMBAUGH, A. M., PH. D.,
Professor of Government and Administration,
- CLARK FISHER ANSLEY, A. M.,
Professor of English.
- FRANKLIN HAZEN POTTER, A. M.,
Assistant Professor of Latin.
- BERTHA GILCHRIST RIDGWAY,
Librarian.
Readers and Laboratory Assistants will be appointed as required.
-

Administrative Committee:

Professor MCCONNELL, Chairman; Professors ANDREWS,
WILSON, WELD and LOOS.

GENERAL INFORMATION.

PURPOSE OF THE SUMMER SESSION.

The primary object in organizing the Summer Session has been to give to teachers in the public schools of Iowa the opportunity to come in touch with the State University and to see something of the methods of work followed in the different departments of instruction there maintained. Every effort will be made to secure this end and to give those in attendance some insight into the more advanced phases of the subjects which they are required to teach in the several grades of the grammar school and the high school. The courses of instruction have been planned with special reference to the wants of those doing or expecting to do work in high schools. Due attention will be given to the subjects of the high school curriculum, both in regard to subject matter and methods of teaching.

University students who have been unable to carry on consecutive work in the collegiate department will find in the Summer Session an opportunity to make substantial progress in certain subjects; also, those intending to enter the University may be able to take advantage of the Summer Session in completing the requirements for admission to the regular University courses.

MANAGEMENT.

The management of the Summer Session has been vested by the Board of Regents in an Administrative Committee appointed by the President of the University.

This Committee will have charge of the work of registering and scheduling students, and jointly with the president will at reasonable times be ready to advise with students in reference to their work.

Office hours of the President of the University, 11 A. M.-12:15 P. M.

Office of the Chairman of the Administrative Committee, President's office, Old Capitol; hours, 2-3 P. M.

ADMISSION.

All students seeking credit in the University will be expected to meet the requirements for Admission as stated in the Annual Catalogue of the University.

All other applicants for admission to the Summer Session will be permitted to schedule for such work as, in the judgment of the professors concerned, they may be able to pursue to advantage.

UNIVERSITY CREDITS.

In general the credit to be granted for work done in the Summer Session will be determined by the collegiate faculty in accordance with the plan usually followed with reference to work done elsewhere than at the University. This plan, briefly outlined, is as follows:

1. Credit will be allowed for courses in any subject of collegiate grade amounting to not less than two term hours; and for shorter courses when, in the judgment of the faculty, the work is such as to form a part of other work for which credit is allowed.

2. Credit will be allowed in any specific subject upon the approval of the professor in charge of that subject in the University.

3. Credit cannot be allowed to any student whose schedule shall exceed twenty hours per week.

4. Students receiving credits must have complied with the requirements for admission to the University.

5. Credit will not be allowed for duplicated work.

Ample opportunity will be afforded students to schedule for work leading either to university or to preparatory credits.

PRIVILEGES.

The general library of the University will be accessible to all students daily except Sundays. Those electing work offered in experimental and observational science will be able to avail themselves of the resources of the various laboratories. (See Material Equipment, pages 104 to 114.) Numerous opportunities will be given students to inspect the large and valuable natural history collections of the University, and there will be lectures by members of the faculty and others upon literary and scientific subjects of general interest to which admission will be free.

No restriction will be placed upon the amount of work which

students may undertake, though the exigencies of a working programme will necessarily limit the range of selection to some extent. However, it is strongly urged that in any case schedules be limited to twenty hours per week, and no credit will be granted when this is exceeded.

GENERAL LECTURES AND ROUND TABLE MEETINGS.

It is proposed to devote each Saturday during the Summer Session to lectures, round table meetings, and other assemblies of general interest. Among those who will give single lectures or courses of lectures may be particularly mentioned the following: President George E. MacLean, Professors T. H. Macbride, G. T. W. Patrick, A. A. Veblen, L. G. Weld, C. C. Nutting, I. A. Loos, W. C. Wilcox, B. F. Shambaugh, and C. F. Ansley.

The lectures to be given will be arranged into a definite Saturday programme before the opening of the session.

Round table meetings for the discussion of various topics of interest to educators will be organized by those in attendance upon the session as circumstances may suggest.

There will be opportunities to listen to addresses by eminent educators from other institutions.

EXAMINATIONS.

Arrangements have been made with the Board of Educational Examiners to hold an examination for state certificates and diplomas at the University on July 20-21. The courses of the Summer Session have been as far as possible arranged to give those desiring to take such examinations the opportunity for preparatory reviews.

EXPENSES.

In lieu of laboratory and library fees, or contingent expenses of any kind, a nominal tuition of five dollars will be arranged for enrollment in the Summer Session.

There are no dormitories and no commons connected with the University. Clubs may be formed, in which the cost of day board is from \$1.50 to \$2.50 a week. Room rent varies from 50 cents to \$1.50 per week for each student. Boarding and lodging in private houses can be obtained for from \$3 to \$5 per week.

SUMMER SESSION OF 1901.

The Summer Session of 1901 will be conducted on a more extensive plan than that of the current year. In addition to courses for teachers and undergraduate students there will be offered numerous advanced courses for candidates for advanced degrees, thus affording such candidates the opportunity of doing work in residence at the University.

LATIN LANGUAGE AND LITERATURE.

ASSISTANT PROFESSOR POTTER.

At least two courses will be given in Latin.

1. A course in methods to cover the entire preparatory work done in the High schools.

The aim will be to give effectual practical training as well as to set forth methods theoretically, by lectures, recitations and free conferences.

The large special library belongings to the department will be at the service of students. Five hours per week.

2. A course equivalent to the regular Freshman course and conducted in the same manner, but the reading will be such as is not covered in the regular course. For this University credit will be given. Five hours per week.

3. It is likely that a third course will be given in more advanced Latin.

During the Summer Session, but not connected with it, it is expected that classes will be formed in Elementary Latin, Cæsar, Cicero and Vergil for work in preparation for the freshman year. These classes will be in charge of an experienced and efficient teacher.

GERMAN LANGUAGE AND LITERATURE.

PROFESSOR WILSON.

1. Course in Methods. Review of grammar to show methods of presenting topics to classes, with drill in the more difficult parts. This course is intended primarily for teachers who already have a knowledge of the language, but can be taken by persons who have never studied German provided they are willing to devote a large part of their time to the subject. This course will be conducted in English. Five hours per week; Room 6, Old Capitol.

2. **German Drama.** One of the most important dramas of Lessing, Goethe, or Schiller will be studied and discussed. The work will be conducted in German and in English. No person should take this course who has not studied German at least one year. It is expected that this course will be taken in connection with Course 3. Mondays, Wednesdays, and Fridays; Room 6, Old Capitol.

3. **Conversation and Composition.** The purpose of this course is to give such persons as already have a fair acquaintance with German some practice in conversation and composition. The work will be carried on entirely in German. It is expected that this course will be taken in connection with Course 2. Tuesdays and Thursdays; Room 6, Old Capitol.

4. **Special Work in German.** The Professor of German offers his time and services to teachers or others who may wish to investigate some particular subject in German. He can be of especial assistance to such persons in directing their work in the Library, the German department of which is particularly rich in the history of German literature, the history of the German language, Goethe literature including Faust, Middle High German, Old High German, and contains complete sets of the most important German philological journals. This course offers a good opportunity for individual work.

Meetings will be held with individual students, at irregular intervals, by appointment.

ENGLISH.

PROFESSOR ANSLEY.

1. **The Teaching of English in Common Schools.** The course is intended for teachers. It will include a survey of English Grammar, with discussion of difficulties and disputed points, and suggestions as to class work in Grammar, Composition, and Literature. Five hours per week.

2. **The Art of Shakespeare.** A study of some elements of literary art as exemplified in Shakespeare's dramas. The course will include detailed study of one of the tragedies. Credit, three term hours. Five hours per week.

HISTORY.

PROFESSOR W. C. WILCOX.

1. **The History of the United States.** This course is designed largely for teachers of United States History. Suggestions about methods of preparing and presenting the subject to

classes, as well as the body of knowledge itself, will constitute the subject-matter of the course. Five hours per week.

2. **The Constitutional History of Early England.** This course will be conducted along the same lines as during the regular session of the University. It consists of topical analyses, lectures and quizzes. Five hours per week.

3. **Seminar in Historical Method.** In this Seminar some topic of intrinsic worth will be investigated for the twofold purpose,—first, of acquiring facility in using the library; and second, of training in methods of organizing and presenting historical material. The Seminar is designed for the more advanced students and the special topic for investigation will be determined by mutual agreement among those who undertake the work. Two hours per week.

POLITICS AND ECONOMICS.

PROFESSOR SHAMBAUGH.

1. **Elements of Politics.** (General Civil Government.) An introductory course in Political Science, wherein the fundamental principles of government (particularly government in the United States) will be presented. Two hours per week, Tu. and Th.

2. **Iowa Government.** A study, historical and descriptive of the constitution and laws of the commonwealth of Iowa. The following topics will indicate the nature and the scope of the course: The constitutional status of the Iowa country from 1699 to 1836; early settlers and settlements; the organization of the Territory of Wisconsin; the constitution and government of the Territory of Iowa; the constitution of 1844; the constitution of 1846; the admission of Iowa into the Union; the constitution of 1857; the codification of the laws; the Governors from Lucas to Shaw; local government; etc. Three hours per week, M., W. and F.

3. **Elements of Economics.** An introductory course in Political Economy, wherein the fundamental concepts of wealth, value, consumption, rent, money, etc., will be presented. Five hours per week.

PHILOSOPHY, PSYCHOLOGY, AND LOGIC.

PROFESSOR PATRICK.

1. **Introduction to Psychology.** A course in general psychology for teachers. Introductory lectures on the subject matter, scope, divisions, and methods of psychology, and on the brain,

nervous system and special senses; followed by an outline course covering the whole ground of general psychology, with special reference to subjects of peculiar pedagogical interest, such as habit, instinct, attention and memory. Lectures, discussions, and required reading. The lectures will be accompanied by demonstrations with apparatus from the psychological Laboratory. Lecture room of the Psychological Laboratory. Five hours per week.

2. **Introduction to Philosophy.** A course in the history of Greek philosophy, introduced and supplemented by lectures on the general introduction to philosophy. The primary object of this course will be to make the student familiar with the problems and divisions of philosophy and with philosophical terms. Credit, three term hours. Lecture room of the Psychological Laboratory. Five hours per week.

3. **Logic.** A course in the principles of deductive reasoning, with practice in the analysis of arguments. Creighton's *Introductory Logic*. Credit, three term hours. (This course is alternative with the preceding, and only one of the two will be given in the summer of 1900). Lecture room of the Psychological Laboratory. Five hours per week.

PEDAGOGY.

PROFESSOR McCONNELL.

These courses are open both to teachers and University students. University credit will be allowed subject to the rules elsewhere announced.

1. **Doctrine and Practice.** It is the purpose in this course to present by exposition the educational doctrines and theories that have become effective in determining the course of school practice, also to discuss other doctrines and theories that give promise of bringing about some modification of commonly accepted ideas of teaching. It will be necessary in this connection to discuss to some extent, the aims of education and the laws upon which the child's development depends, and to devote some time to the application of the laws of development to the selection and arrangement of the materials of instruction. The course is open to teachers and to University students who have taken a course in general psychology. Five hours per week.

2. **The High School.** It is the purpose in this course to treat the following topics:

- (1) The function of the public high school.

(2) The curriculum of the high school with special reference to the selection and arrangement of suitable subjects of instruction.

(3) High school management and teaching.

Five hours per week.

3. **Graded School Management.** This course will include a discussion of the ordinary problems of school supervision. Some time will be given to the problems of classification and organization as these problems arise in the village school. Two hours per week.

PHYSICS.

PROFESSOR VERLEN.

1. **Mechanics.** This course is planned with special reference to the needs of teachers. It will consist of lectures and recitations on the mechanics of solids and fluids, and will include demonstration experiments in illustration of the subjects treated. Suggestions on the best method of presenting the subject to high school classes will be given from time to time. Candidates for this course should possess a good working knowledge of algebra and geometry. Five hours per week.

2. **Laboratory Work.** The work in the laboratory being entirely individual, students of various degrees of advancement can be accommodated. It is required, for admission to laboratory courses, that the candidate should have at least a good elementary preparation in physics. Students who have had work equivalent to the first year's course in physics in the University, may obtain university credit for laboratory work pursued for not less than ten hours a week during the session. For teachers the laboratory work can be arranged to meet individual needs, such as gaining familiarity with particular pieces of apparatus, or carrying out special lines of experimentation.

The instruction in the laboratory will be given from eight to ten o'clock each morning, except Saturday; and it is expected that each student will work during two consecutive hours upon each exercise. Courses of three, four, or five exercises a week may be arranged.

ZOOLOGY.

PROFESSOR NUTTING.

1. **General Zoology.** A number of typical invertebrata will be studied, including Paramecium, Hydroid, Jelly-fish, Coral, Sea Fan, Star-fish, Sea Urchin, Earth-worm, Tube-dwelling worm, Cray-fish, Crab, and Grasshopper.

The Zoological relationship of each of these forms will be discussed and the outlines of classification given. One hour a week will be devoted to a lecture in which general biological principles will be discussed and additional information concerning special groups of animals will be presented. This will be essentially a laboratory course for which ample material will be available from the Museum of Natural History. Five hours per week.

2. **Teachers' Course.** Some preliminary knowledge of Zoology will be expected of those who enter this course. In order that this work may embrace something of human anatomy and physiology the time will be devoted to a study of the *vertebrata*, particularly the *mammalia*. At least once a week a lecture will be given on a subject of general biological interest, such as heredity, embryology, geographical distribution, coloration of animals, etc.; or the hour will be devoted to a discussion of the educational value of the study of Zoology and the methods by which it can be most fully secured. The extensive collection of mammals in the museum, and a good working library of reference books on zoological subjects will be available to students pursuing this course. Five hours per week.

BOTANY.

PROFESSOR MACBRIDE.

Two courses in botanical research are offered, as follows:

1. The study of types illustrating those natural orders of flowering plants which are most widely represented throughout the state.

The study of types illustrating the several groups or divisions of so-called cryptogamous plants, especially as illustrated by forms everywhere easily accessible.

Each plant studied will be presented in such manner as to bring out as far as practicable the various methods of modern botanical research, special attention being paid to various problems in plant ecology, physiology, habit, distribution, etc. This course is intended especially for teachers of elementary botany. Five hours per week.

2. A course in Vegetable Morphology and Histology. The morphology of the vegetable cell will be taken up, and its modifications in the formation of the various tissues and structures of the higher plants will be considered and illustrated in the general laboratory.

So far as possible the students will be taught the more common methods of preparing, sectioning, staining and mounting the various objects used in illustration. Five hours per week.

MATHEMATICS AND ASTRONOMY.

PROFESSOR WELD.

The following courses in mathematics will be given with special reference to the needs of teachers preparing to take examinations for state certificates or diplomas. The first two courses (Algebra and Geometry) being required for admission to the University, no credit can be given for these courses except as preparatory work. In the third course (Trigonometry) the ground to be covered is substantially the same as in the corresponding course in the University curriculum, and equivalent university credit will be allowed.

Each course will be concluded with a written examination.

1. **Algebra.** This will be essentially a teachers' course, both subject matter and methods of presentation being given careful attention. The theories of the minus sign and of the exponent will be considered at the outset. Drill work in the fundamental operations will be given, especially in factoring. The simple equation of first degree will next be studied and geometrically interpreted, after which the quadratic equation will be treated in a similar manner. Attention will also be given to systems of simultaneous equations. The process of evolution, both as applied to algebraic functions and to numerical quantities, will next be studied. The course will include a study of imaginary expressions and their interpretation. Five hours per week.

2. **Geometry.** This course will be presented with due reference to methods of instruction. The so-called heuristic, laboratory and other methods of teaching geometry will be discussed and illustrated. At the same time the work will be so conducted as to enable the student to obtain a comprehensive view of the subject. Especial notice will be taken of the needs of those intending to pass the examinations for state diplomas or for admission to the University. Five hours per week.

3. **Trigonometry.** The course will be limited to plane trigonometry and can be taken only by those having a good knowledge of geometry and elementary algebra. The subject will be studied with special reference to its practical applications to surveying, navigation, mensuration, etc. Credit, three term hours. Five hours per week.

4. **Astronomy.** It is expected that a series of Saturday lectures will be given on some of the principal topics of Astronomy. These will be supplemented by visits to the observatory where many of the more interesting celestial objects may be located and studied with the aid of the telescope.

LAW DEPARTMENT.

FACULTY AND LECTURERS.

GEORGE E. MACLEAN, PH. D., LL. D.,
President.
EMLIN McCLAIN, A. M., LL. D.,
Chancellor and Resident Professor of Law.
SAMUEL HAYES, M. S., LL. B.,
Resident Professor of Law.
HARRY SANGER RICHARDS, PH. B., LL. B.,
Resident Professor of Law.
ELMER ALMY WILCOX, A. B.,
Resident Professor of Law.
MARTIN JOSEPH WADE, LL. B.,
Lecturer on Law.
HORACE EMBERSON DEEMER, LL. B.,
Lecturer on Law.

THEODORE ANDERSON, PH. B., LL. B.,
Librarian.

EXAMINING COMMITTEE FOR 1898-9.

(Appointed by the Supreme Court of Iowa.)

J. W. BOLLINGER, Davenport,	C. H. MURPHY, Davenport.
C. E. COHOON, Emmetsburg.	C. L. POWELL, Des Moines.
F. E. GILL, Sioux City.	C. G. SAUNDERS, Council Bluffs.
S. H. KERR, Rolfe.	H. F. SCHULTZ, Storm Lake.
W. O. LUCAS, Winterset.	H. E. ST. CLAIR, Spirit Lake.
G. H. MAYNE, Council Bluffs.	S. G. VAN AUKEN, Des Moines.
W. C. McARTHUR, Burlington.	J. E. WILLIAMS, Waterloo.

LAW DEPARTMENT.

PREPARATORY STUDY; LENGTH OF COURSE.

The profession of law is properly regarded as a learned profession, requiring a considerable degree of general education as a preparation for its study and practice. Those who can take a college course either in whole or in part, before entering upon the prescribed period of law study, should do so, and it is recommended that in preparatory study special attention be given to American and English history, political science, and international law. Whether one who desires to enter upon the study of law shall have collegiate preparation may perhaps be left to his own judgment, with the suggestion that such preparation is important to ultimate professional success. But in order that the student may successfully prosecute his studies in the law school he should have at least a high school education or its equivalent, and this will be insisted upon as a condition for admission to this Department.

The Statutes of Iowa regulating admission to the bar require two years' study of law, and the same term of study is required for graduation from the Law Department. The course of study is arranged on this basis, extending through two school years of thirty-six weeks each, exclusive of vacations, and the students are classified accordingly as Juniors and Seniors. The State Bar Association has recommended to the Legislature the extension of the required term of study for admission to the Bar to three years, and whenever such extension is made the Law Department will, without doubt, extend its course of study to three years, and in this respect as in others strive to keep abreast of the best law schools of the country, but so long as a two years' term of study is sufficient to secure admission to the bar it is not deemed expedient to require a longer term for graduation from the Department.

METHODS OF INSTRUCTION.

The aim of any course of instruction in law may properly be considered as twofold: First, to impart a knowledge of the recognized principles of the law, and, secondly, to discipline the mind in methods of legal study. Various methods of instruction, each having its special merits, are pursued in different schools. They may be roughly arranged in three classes, namely, lectures, text-book instruction, and study of cases. The peculiar merit of the first is that it may be made the means of giving the most vivid and striking picture of legal principles; the second furnishes the most convenient means of individual study, and the third the best discipline in legal thinking. In this school the effort is made so to present the subjects as to combine in the highest practicable degree the excellences of these various methods.

In connection with several of the lecture courses, the students are furnished with printed synopses, which give in a concise form, and more accurately than a student would usually write them in his notebook, the principal doctrines of the subject, arranged according to some analytical method. On some of the most extensive and important subjects, the students are required to provide themselves with and use text-books in which lessons are to be regularly prepared and recited, the recitations either following, or being accompanied with, oral explanations more or less formal, calling attention to the important doctrines and explaining those which may be obscure. The study of leading cases is carried on extensively in connection with the courses of lectures, references for that purpose being given by the lecturer, or printed in the synopsis, and the student is frequently required to state briefly in the class the points decided in cases assigned for that purpose. In some subjects the students are required to provide themselves with volumes of selected cases, and the exercise in the class consists of a discussion of such cases by members of the class, and deduction therefrom of the rules of law on the topic to which the cases relate. This exercise in developing the rules of law from actual cases selected for the purpose, and studied by each student before their discussion in the class, familiarizes the student with the methods of investigation pursued by the lawyer and the judge, and gives not only a knowledge of the law on the subject, but a discipline in research and in legal thinking not to be attained, it is believed, in any other way. As a preparation for this method of study, the course in the study of cases is especially valuable.

The fact that the greater part of the instruction is by resident professors, giving their entire time to the school, makes

it possible to pursue each subject consecutively, one hour a day, until it is concluded. In this way the student is able to obtain a clearer and more complete conception of the subject presented than would be possible if the instruction were irregular and disconnected.

As an aid and stimulus in study, and also for the purpose of furnishing satisfactory evidence of progress, written examinations are required from time to time on the various topics of the course, and until a reasonable proficiency in each topic has thus been shown, the candidate for graduation will not be presented to the committee for final examination.

SCHEDULE OF STUDIES.

The course of study is so arranged that the Junior and Senior classes have separate and distinct courses of instruction throughout, and the subjects are divided between the two courses and arranged in each course so as to be presented in natural order.

In the Junior year are placed subjects which are elementary and at the same time fundamental. The work of this year is therefore of more importance to the student than that of the Senior year, and requires careful study, thereby imparting thorough discipline and a familiarity with the methods of legal reasoning. It is believed that the Junior studies are such as to make of the greatest value to the student the services of regular and experienced instructors and the advantages of a law school. Unless the principles of law as a system, the nature of its important divisions, and the fundamental doctrines of such subjects as Elementary Law, Contract, Torts, Criminal Law, Pleading, and Evidence, are thoroughly mastered, the whole legal education will be defective and unsatisfactory.

The courses of study are so arranged that the students in each year shall have instruction in studies peculiar to that year for at least two hours a day, that time being divided between two instructors on separate subjects, which are thus carried along together. In each class a third hour of class work will be required during a part of the year.

The following schedule of studies has several features to some extent peculiar. At the beginning of the Junior year a course of lectures, occupying one hour a day, is given on Elementary Law, in which course the attention of the student is called to the nature of law, its sources and development, the difference between the unwritten and the written law, the method of determining what the law is by use of reports, stat-

utes, treatises, digests, etc., and finally to the different branches into which the whole body is usually divided, and their relations to each other. This course covers remedial as well as substantive law, and thus furnishes instruction in the general principles of pleading, serving in this respect as a basis for the study of Code Pleading.

To the various branches of pleading and practice, special attention is given. Although it has been generally considered that the logic of pleading is to be found in the common law system, while the code system is looked upon as unscientific, yet a comparative study of the two will show that the latter is broader in its principles and more liberal in its application than the former. The principal branches of practice are fully treated during the Junior year in order that the student may apply them in the moot courts; but an advanced course in pleading with special reference to principles of common law pleading is given in the Senior year.

The school attempts to teach how to ascertain the authoritative value of cases. There is one course in which this is the only purpose. In this course the facts, pleadings, and result of each case are briefly stated by the student. Attention is then directed to the manner in which the case reached the court whose opinion is reported. The student is required to discover exactly what proposition of law was essential to the decision and to eliminate *dicta*. To this end he is finally required to prepare a brief but accurate note of the doctrine for which the case is authority. This work is intended to fit students for preparing briefs, text-books, and digests. Obviously this method is identical with that adopted by all careful lawyers in collecting authorities. The student who has mastered the system is prepared to make good use of other case courses in which the ultimate purpose is the mastery of the subject to which the cases pertain, and, indeed, is prepared to use intelligently all cases to which he may be referred in any part of his study or future practice.

The following schedule presents the course substantially as it was given during the year 1899-1900.

JUNIOR YEAR.

FALL TERM.

Elementary Law. A course of lectures presenting the elementary principles of law in general, and of its important branches. This course covers also the principles of pleading. Eight and one-half weeks. PROFESSOR WILCOX.

Contracts and Study of Cases. Bishop on Contracts, and Wambaugh's Cases for Analysis are the text-books used. Thirteen and one-half weeks. Professor RICHARDS.

Code Pleading. A course of instruction, mainly by lectures, on pleading under the codes with practical exercises. Five weeks. Professor HAYES.

WINTER TERM.

Sales, Bailments and Pledges. A course of instruction by the use of Burdick's Cases on Sales and printed synopsis of bailments and pledges. Nine weeks. Chancellor McCLAIN.

Torts. Recitations in Cooley on Torts, with oral explanations, and citation and examination of leading cases. Eleven weeks. Professor HAYES.

Agency. A course of lectures. One week. _____

Domestic Relations. A course of lectures on the subject of marriage and divorce, the property rights of married women, parent and child, guardian and ward, the rights and liabilities of infants, and kindred topics. Three weeks. Judge DEEMER.

SPRING TERM.

Negotiable Instruments. Recitations in Norton on Bills and Notes, and Johnson's Cases. Five weeks. Professor WILCOX.

Trial and Judgment. Lectures on procedure at law in Courts of Record from the beginning of the trial until the entering of judgment, with references to statutory provisions. Five weeks. Professor HAYES.

Evidence. Recitations in Jones on Evidence. Five weeks. Judge WADE.

Criminal Law. A course of lectures accompanied with recitations in McClain's Outlines of Criminal Law and Procedure, and Fisher's Criminal Cases, with references also to statutory provisions. Five weeks. Professor WILCOX.

Probate Law and Procedure. A course of lectures on the execution and probate of wills, and the law of executors and administrators, including the settlement and distribution of decedents estates, with references to statutory provisions and examination of cases. Five weeks. Professor RICHARDS.

International Law. Lectures, with recitations in Snow's Cases on International Law as a text-book. Optional. Four weeks. Chancellor McCLAIN. [Not given in 1899-1900.]

SENIOR YEAR.

FALL TERM.

Real Property. Recitations in Tiedeman on Real Property, accompanied with oral explanations and references to leading cases and lectures on actions to recover real property. Ten weeks. Professor HAYES.

Insurance. A course of lectures on Fire, Life, and Accident Insurance. Four weeks. Chancellor McCLAIN.

Carriers. Study of cases, McClain's Cases on Carriers (covering both carriers of goods and carriers of passengers) being used as a text-book. Six weeks. Chancellor McCLAIN.

Criminal Procedure. Lectures with recitations in McClain's Outlines of Criminal Law and Procedure. Three and one-half weeks. Professor WILCOX.

Chattel Mortgages. Recitations in Jones on Chattel Mortgages. Three and one-half weeks. Chancellor McCLAIN.

WINTER TERM.

Equity and Equity Pleading. Recitations in Bispham on Equity. Lectures on Equity Pleading. Nine weeks. Professor RICHARDS.

Corporations. Lectures upon the general doctrines of the Law of Corporations, both private and municipal, with recitations in Shepard's Cases on Corporations. Seven weeks. Professor WILCOX.

Appellate Proceedings. Lectures upon the practice and procedure in Appellate Courts. One week. Chancellor McCLAIN.

Justice Practice. Lectures on Practice in Justices' Courts. One week. Optional. Professor HAYES.

Guaranty and Suretyship. A course of lectures. One week. Judge DEEMER.

Trial Practice. A course of lectures. Two weeks. Judge DEEMER.

Damages. Recitations in Beale's Cases on Damages. Optional. Four weeks. Chancellor McCLAIN.

SPRING TERM.

Partnership. Study of Cases, Burdick's Cases on Partnership being used as a text-book. Five weeks. (Two weeks in winter term.) Professor RICHARDS.

Constitutional Law and Federal Jurisprudence. Lectures, with recitations in McClain's cases on Constitutional Law. Ten weeks. Chancellor McCLAIN.

Pleading. An advanced course, Perry on Pleading being used as a text-book, with lectures. Three weeks. Professor HAYES.

Attachment, Garnishment and Execution. Lectures, with reference to statutory provisions and leading cases. Three weeks. Professor HAYES.

STUDIES IN COLLEGIATE DEPARTMENT.

For the purpose of giving the law students all the advantages of the University which it will be practicable for them to make use of, it has been arranged that so many of them as can do so without interference with the regular studies required of them in the Law Department, may attend any classes in the Collegiate Department.

Special attention is called to the opportunity thus afforded for the study of elocution (in which separate classes are organized for law students) and for pursuing any of the courses of study laid down in political science, in history, in logic, or in English. No extra charge will be made for such studies, but law students will be admitted to such classes only on the approval of the Law Faculty, and with the consent of the professor whose class they desire to enter.

LAW ELECTIVES FOR COLLEGIATE STUDENTS.

The Collegiate Faculty permits Seniors in that Department to take as elective studies in their collegiate course, and to receive credit therefor, any of the Junior law studies to the extent of thirty-six weeks' work of one hour a day, but this provision does not apply to students entering the Senior year from other colleges.

It is believed that, whether looked upon as a means of mental discipline or as a preparation for the duties of citizenship or the prosecution of business, a full course in the Law Department will be found, for those who are properly prepared for it and can pursue it as a part of a liberal education, fully equal to any course of study that can be pursued for the same length of time. If, however, a student deems it not practicable for him to pursue such a course of study after graduation from the Collegiate Department, he may derive some of the advantages of such study, and some insight into the principles and method of the system of law under which he lives, by electing as part of his regular course some of the groups of studies above given.

Credit will be given to students in the Collegiate Department taking studies in this Department for work done, but no

credit can be given to those students in respect to time, the statute requiring, for admission to the bar of the State, that the applicant shall have spent at least two years of nine months each in a law school, or two years of twelve months each in the office of some practicing attorney. Therefore, while this department gives credit for work done in any study taken with its classes, yet it will not give credit for time unless the student taking such study or studies shall have been duly enrolled as a student in this Department.

MOOT COURTS.

For the purpose of affording exercise in the application of legal principles to statements of facts, and in connection with instruction in pleading and practice, moot courts have become a well recognized and important feature of the law school. Two such courts are conducted in connection with the Department, holding their sessions on one or more afternoons of each week, each presided over by a member of the Faculty. It is deemed best to keep the members of the two classes separate in this, as in other work of the school, and it is thus possible to select the cases assigned so that they may relate to subjects on which the students have already had instruction. The Senior moot court will be organized at the beginning of the fall term, whilst that of the Juniors will not commence its work until the winter term, practical exercises in pleading being given the members of that class during the fall term, in connection with instruction in pleading and practice.

The method of conducting these courts is to give to two or more students, representing the attorneys in the case, a written statement showing the facts on which the action and defense are to be based. Pleadings are then prepared as they would be in an actual case. These pleadings are subjected to attack by motion or demurrer, and the issues of law or fact raised are tried to the court, the statement of facts being regarded as the evidence offered on issues of fact.

Another method of trial has been introduced with success, which involves the proof by competent evidence of the facts shown by the statement. This gives practice in the examination of witnesses and in applying the rules determining the admissibility of evidence. During one term, trials are conducted with all the formalities usual in *nisi prius* courts, jurors being summoned and impaneled, witnesses subpoenaed, and instructions prepared and given.

It is also recommended that the students form club courts for further exercise in pleading and practice. Professors will

give such assistance in forming and conducting club courts as is needed.

LITERARY SOCIETIES.

Two literary societies, the Hammond Law Senate and The Forum, composed exclusively of students of this Department, hold regular weekly meetings, furnishing to their members valuable training in debating and other exercises usually provided for by such organizations.

LIBRARY FACILITIES.

In commodious quarters on the same floor with the lecture room is the Law library of nine thousand six hundred and fifty volumes, to which the students have personal access. This library contains a full series of the reports of the Supreme Court of the United States and of the courts of last resort of thirty-six states, including all the series of reports most frequently referred to; also the American Decisions, American Reports, American State Reports, Lawyers' Reports Annotated, English Ruling Cases, a collection of English Reports, which, with additions lately made, is almost complete, full series of the Reporter System, and a large collection of the latest and best law text-books.

The library is in charge of a regular librarian who renders valuable assistance to the students in the prosecution of their work.

The library rooms are open for the use of students from 8 A. M. to 12 M., and from 1:30 to 5:30 and 7 to 9 P. M. of each school day, and during the forenoon of Saturday.

The University library is open to the students of this Department, as well as those of the other Departments of the University, and books may be drawn from it under reasonable regulations. No extra charge is made for the privilege of either of the libraries.

HAMMOND HISTORICAL LAW COLLECTION.

A valuable collection of twelve hundred volumes relating principally to the Civil Law and the History of the Common Law, presented to the University by the widow of William G. Hammond, LL. D., the first Chancellor of the Law Department, is kept in the Law library as a separate collection for the use of the students of the Department and others interested in such subjects. These books are in special cases, under the charge of the Law Librarian, and accessible on request.

LECTURE HALL.

The Law Department has the exclusive occupancy of the second floor of the central, or stone, building on the campus, which was erected for and used as the Capitol Building before the removal of the capital of the State to Des Moines. The rooms on this floor are those formerly occupied as legislative chambers. The lecture hall is furnished with chairs provided with broad arm-rests for use in taking notes.

FEES AND EXPENSES.

The rate of tuition established by the Board of Regents is \$20 per term of about twelve weeks, payable to the Secretary of the University. It is required by recent action of the Board of Regents that tuitions shall be paid by new students at the time of their matriculation, and by old students at the time of their registering at the opening of the term. Each student upon passing his final examination, is required to pay the sum of \$7 as a graduation fee, to cover the charge for diploma and for certificates of admission to the State and Federal Courts. There are no other fees or charges.

Other expenses may be made very reasonable. Good board and lodging can be had at from \$3.50 to \$4.50 per week, and this may be reduced to \$2.50 or \$3.00 per week by taking meals in clubs.

COST OF BOOKS.

The books required for use in recitations, and with which the student must provide himself, are the following:

Bishop on Contracts; Wambaugh's Cases for Analysis; McClain's Synopses; Annotated Code of Iowa; Burdick's Cases on Sales; Cooley on Torts; Jones on Evidence; McClain's Outlines of Criminal Law and Procedure; Fisher's Criminal Cases; Norton on Bills and Notes; Tiedeman on Real Property; McClain's Cases on Carriers; Jones on Chattel Mortgages; Bispham's Principles of Equity; Shepard's Cases on Corporations; McClain's Cases on Constitutional Law; Perry on Pleading; Burdick's Cases on Partnership, and the Law Bulletin.

The cost of the required books will not exceed \$45.00 for the Junior year, or \$70.00 for both years.

The student will find it greatly to his advantage to provide himself with a good law dictionary, and if practicable, a copy of Blackstone's Commentaries in any edition. It is desirable, also, that the student bring with him or purchase, in addition to the above list of required books, as many as practicable of the following which are recommended as the leading and best books

on the subjects which are taught by lectures or cases: Walker's American Law, or Pomeroy's Municipal Law; Schouler's Domestic Relations; Pomeroy's Remedies and Remedial Rights, or Bliss on Code Pleading; Drake on Attachment; Benjamin, or Tiedeman, on Sales; Schouler on Bailments and Carriers; Story, or Mechem, on Agency; Bates on Partnership; May on Insurance; Beach, or Morawetz, on Corporations; Curtis on Jurisdiction of Federal Courts; Cooley's Principles of Constitutional Law, or Cooley's Constitutional Limitations.

Any of the books mentioned may be procured through the Law Librarian from time to time, as needed, at a considerable reduction from list price; they are not kept for sale by the bookstores in Iowa City.

The Department owns about twelve sets of the text-books above mentioned as required in the course, which it will rent in sets to students, furnishing them all the books required for either year for \$12.50 for the year. The rent sets do not include a law dictionary, nor the Law Bulletin. As there are sometimes more calls for rent sets than can be met, those who desire to rent books should make application in advance.

ENROLLMENT AND PRELIMINARY EXAMINATIONS.

Students may enroll at any time. It is better, however, to enter at the beginning of the term, and best to enter at the commencement of the school year.

Those who enter the Department are expected to have an English education at least equivalent to that generally given in the high schools of the state. A diploma, or certificate, showing the completion of a college or high school course, or a course of study in an academy, equivalent to a high school course, will be accepted in lieu of an examination. Students who have not such diploma or certificate, must take a preliminary examination in the usual branches of a high school course, or present such evidence of proficiency therein as the Faculty may require.

At the preliminary examination of September, 1898, each candidate was required to write a short essay, correct in expression, spelling, capitalisation, punctuation and paragraphing, on any one of the following subjects, the essay not containing less than three hundred nor more than six hundred words. The subjects were:

Daniel Webster and contemporaneous history; The Monroe Doctrine; Causes leading to the War with England in 1812; The Missouri Compromise; Kansas, the struggle as to whether it should be free or slave; Penn and the Settlement of Pennsylvania; The Settlement of Jamestown.

Future examinations will be similar to the examination here described, the subjects for essays varying from year to year.

Students wishing to study special subjects without graduation will be admitted without preliminary examination upon showing themselves qualified to pursue the studies desired.

Preliminary examinations will be held on Wednesday, September 19, 1900, commencing at 9 A. M.

ADMISSION TO SENIOR STANDING.

To be qualified for admission to the Senior class a student must have studied law in this or some other law school for at least thirty-six weeks, so that on the completion of the Senior year in this school he will have had the two years of law study required by the statute for admission to practice in the Supreme Court of Iowa. In exceptional cases the Faculty will accept a certificate of reading under the direction of an attorney for not less than four months in lieu of law school work; but a substitution of this kind will be discouraged, and will not be accepted for more than one of the three terms of school work required for the Junior year. Credit for time of practice as a licensed attorney in this or any other state will be given under the same limitations. If any claim for credit on account of reading under an attorney's direction or for time of practice as a licensed attorney is to be made, certificates of the necessary facts must be presented when the student asks enrollment as a Senior, that is at the beginning of the fall term.

In addition to the requirements as to time, it will be necessary that the applicant shall pass an examination, before admission to the Senior class, upon at least five of the principal subjects of the Junior year, and if he is a candidate for graduation it will be necessary, in addition to the five subjects before mentioned, that he shall pass upon all the subjects of the Junior year as well as those of the Senior year, at some time previous to his graduation. This rule applies to those who have been admitted to practice as well as to students of law.

The examinations for admission to the Senior class for those who have not previously completed the Junior course in the Department will commence on the first day of the University year, Wednesday, September 19, 1900.

It will be seen from the above statement that the Faculty requires for graduation substantially two years of law school study, giving credit in no case for office reading or time of practice beyond three months of law school work. Those who desire to be enrolled as Seniors in September, 1900, for graduation in June, 1901, may do so under the provisions announced in pre-

vious catalogues by which a substitution of office study to the extent of eight months in lieu of two of the three terms of the Junior year, was permitted.

The Faculty feels that two years of law school work is the very least that should be accepted as sufficient to entitle a student to graduation and therefore it will not permit the work of the Junior and the Senior years to be combined or carried on at one time, except that students who are properly admitted to Senior standing will be allowed to make up any portion of the Junior course in which they are deficient. It must be borne in mind that it is not the number of pages read, nor the number of answers learned, which determines the student's attainments in law, but that discipline and development of the mind, and the habit of correct legal thinking, are essential elements of a legal education. Experience has shown how imperfect, as a rule, is the preparation of those who study in offices, and how necessary systematic instruction is at the beginning of the student's course, and the Faculty strongly recommends that all the studies of the Junior year be pursued in the law school and that if but one year can be spent in school, the student shall commence his studies there and read in an office afterwards. Even those who have had previous reading in an office will, it is believed, usually find the instruction in the Junior year to be of greater importance to them than that of the Senior year in obtaining a thorough and accurate knowledge of the law. The practical advantages of experience will prove of greater benefit after the principles of law have been acquired than at the beginning of the study.

GRADUATION.

Two years' study is essential to graduation, one year of which must have been spent in this school.

Students will be given credit for time of study in another school to the extent of one year. In exceptional cases office study or time of practice as an attorney may be accepted as a substitute for three months of law school work.

Before being recommended for graduation, the candidate who has pursued a portion of his studies elsewhere, must satisfy the Faculty of his proficiency in those studies by passing examinations therein.

Candidates for graduation must be of good character and must, upon being recommended by the Faculty, pass a final examination conducted at Iowa City by a committee of examiners appointed by the Supreme Court of Iowa, in accordance with the rules of that court regulating admission to the bar. Upon

passing such examination, the candidates receive the degree of Bachelor of Laws, and are admitted to practice in all courts of the State of Iowa, oaths of admission being administered in connection with their graduation; and they receive the usual diplomas, and certificates of admission. Those who are not twenty-one years of age may pass the examination and receive their diplomas, but cannot be admitted to practice until attaining that age.

Final examinations will be held only at the end of the University year.

THESES.

Each candidate for graduation must present to the Faculty, on or before the first Monday in April, a thesis upon some legal topic approved by the Faculty. Such thesis must be legibly written, or printed by typewriter, on paper 8 x 10 1-2 inches in size of page, leaving a blank margin of at least one inch at each side and at top and bottom. The thesis shall not be less than 1,500 nor more than 2,500 words in length, exclusive of citations of authorities. In citing cases the names of parties, as well as the volume and page of the report, must be given. The character of the thesis will be taken into account in determining whether the candidate is qualified to be recommended to the Examining Committee for final examination.

All theses become the property of the department.

The subjects approved by the Faculty for the year 1899-1900 are as follows:

1. Discuss the validity of a contract for an agreed valuation in case of a loss by carrier's negligence.
2. Discuss the power of one partner to bind the firm on an obligation within the scope of the partnership business, where the other partner objects to such obligation and the third party has notice of the objection.
3. Discuss how far the general intent of the testator, in the case of a charitable trust, will be given effect, where the specific object of the trust fails.
4. Discuss whether or not in cases of estoppel to deny partnership, by reason of holding out as such, the rule of marshalling will be applied, where the party estopped has individual creditors.
5. Discuss mental suffering as an element of damage at common law.
6. Discuss the liability of one who has indorsed a promissory note for accommodation before delivery to the payee.

7. Discuss the law governing a contract made in one state but to be wholly performed in another.

8. Discuss the right of a state to punish for a homicide committed outside its borders when the death occurred within them.

9. Discuss the malicious prosecution of a civil action without attachment of property or arrest of person as a cause of action.

10. Discuss the grounds for holding several persons who became stockholders in a supposed corporation liable as partners when for any reason no incorporation was accomplished.

11. What is the legal force of a written contract to pay the damages caused by the promisor to the promisee by a tortious act made after the action on the tort has become barred?

12. Is a contract good which undertakes to exempt a corporation from all liability for the negligence of its servants?

13. Discuss arbitration as a condition precedent to a right of action for breach of contract.

14. Discuss the measure of recovery under a fire policy for damage to property in which the insured has only a limited interest.

Any further information may be obtained by addressing the President of the University, or Emlin McClain, Chancellor of the Law Department, at Iowa City, Iowa.

MEDICAL DEPARTMENT.

FACULTY AND OTHER INSTRUCTORS.

- GEORGE EDWIN MACLEAN, PH. D., LL. D.,**
President of the University.
- PHILO JUDSON FARNSWORTH, A. M., M. D.,**
Emeritus Professor of Materia Medica, and Therapeutics.
- JOHN CLINTON SHRADEB, A. M., M. D., LL. D.,**
Emeritus Professor of Obstetrics, Gynecology, Clinical Gynecology, and Diseases of Children.
- WILLIAM DRUMMOND MIDDLETON, A. M., M. D.,**
Professor of Surgery and Clinical Surgery, and Dean of the Faculty.
- LAWRENCE WILLIAM LITTIG, A. M., M. D., M. R. C. S.,**
Professor of Theory and Practice of Medicine, and Clinical Medicine, and Assistant to the Chair of Surgery.
- JAMES RENWICK GUTHRIE, A. M., M. D.,**
Professor of Obstetrics and Gynecology.
- ELBERT WILLIAM ROCKWOOD, B. S., M. D.,**
Professor of Chemistry and Toxicology, and Secretary of the Faculty.
- JAMES WILLIAM DALBEY, B. S., M. D.,**
Professor of Ophthalmology.
- CHARLES SUMNER CHASE, A. M., M. D.,**
Professor of Materia Medica and Therapeutics.
- WALTER LAWRENCE BIERRING, M. D.,**
Professor of Pathology and Bacteriology, and Clinical Assistant to the Chair of Obstetrics and Gynecology.
- JOHN WALTER HARRIMAN, M. D.,**
Professor of Anatomy and Assistant to the Surgical Clinic.
- CHARLES MOORE ROBERTSON, A. M., M. D.,**
Professor of Otolaryngology, Rhinology, and Laryngology.
- WILLIAM ROBERT WHITEIS, M. S., M. D.,**
Professor of Histology and Embryology, and Clinical Assistant to the Chair of Otolaryngology, Rhinology, and Laryngology.
- LEE WALLACE DEAN, M. S., M. D.,**
Acting Professor of Physiology and Assistant to the Chair of Ophthalmology.
- MARTIN J. WADE, LL. B.,**
Professor of Medical Jurisprudence.

GERSHOM HYDE HILL, A. B., M. D.,

Lecturer on Insanity.

FRANK THOMAS BREENE, D. D. S., M. D.,

Lecturer on Dentistry.

EMIL LOUIS BOERNER, PHARM. D.,

Instructor in Pharmacy.

WILLIAM EDWARD BARLOW, M. A.,

Demonstrator of Chemistry.

WILBER JOHN TEETERS, M. S., PH. C.,

Demonstrator of Chemistry.

JOHN THOMAS McCLINTOCK, A. B., M. D.,

Demonstrator of Anatomy, Pathology, and Bacteriology.

JAMES FREDERICK CLARKE, A. M., M. D.,

Lecturer on Hygiene.

JOHN BLAIR KESSLER, M. D.,

Lecturer on Dermatology.

WILLIAM GREEN,

Janitor.

MEDICAL ALUMNI ASSOCIATION.

The annual meeting is held in the amphitheater of the Medical Department, at 2 o'clock P. M., on the day of Commencement.

Every graduate of the Department is requested to send his or her name and address to the Secretary for enrollment.

OFFICERS, 1899-1900.

President—DR. M. B. MOON, Iowa City.

Secretary—DR. S. S. LITTLE, Iowa City.

MEDICAL DEPARTMENT.

A thorough elementary preparation is required before entering on the course of medical lectures. The University affords a preliminary scientific course preparatory to the professional, and it is expected that many will avail themselves of this opportunity. In the branches of medicine there should be a thorough training in principles before the practical portion is begun. For this purpose a careful presentation of the subjects is made by lectures, and the knowledge fixed by recitations and frequent reviews. Ample means of illustration are used, and the materials for demonstration are abundant. In the practical branches abundant clinical material is found to illustrate the subjects taught.

Medical, surgical, gynecological, ophthalmological, dermatological, otological and rhino-laryngological clinics are held each week during the term. Attendance upon these is required of all students, excepting those engaged in laboratory work during clinic hours.

The thirty-first annual course of lectures will begin on September 19, 1900, and will close on April 3, 1901. There will be a holiday vacation commencing Thursday evening, December 20, and ending Wednesday morning, January 2, 1901.

The course is divided into four years of twenty-six weeks each. The Board of Regents has decided that beginning with the session of 1902-3 the length of the annual course of lectures shall be thirty-six weeks to correspond with that of the collegiate and law departments. For those who enter as regular students in September, 1900 or 1901, there will be, during their course, no increase in fees with the extension of the term.

OUTLINE OF THE PLAN OF INSTRUCTION.

ANATOMY.

The lectures in anatomy will be illustrated by means of specimens, charts, models, dissections, and black-board figures. Special effort will be made to associate anatomical arrangement with clinical facts and methods of diagnosis.

During the first year the lectures will cover the subjects of osteology, syndesmology, the alimentary canal and associated structures, the vascular and respiratory systems. These will be presented in full detail from their anatomical, mechanical, and functional aspects, attention being paid to practical developmental laws and relations of viscera to surface markings and neighboring structures.

In the second year the subjects covered during the first year will be carefully reviewed with additional reference to the medical and surgical anatomy. The nervous system and the anatomy of the special senses will be presented in detail not only by lectures but also by practical demonstrations to the class divided into small sections.

The third year will be devoted entirely to regional anatomy. The lectures during this year will at all times be illustrated by special dissections or surface marking upon the living subject.

PRACTICAL ANATOMY.

The thorough study of this branch, for at least four courses, is made a condition of graduation. Facilities for obtaining material are such, under improved legislation in the State, that an abundance will be provided for all who may apply. The demonstrators will always be ready to aid and direct the prosecution of these studies.

Upon the completion of each course of dissection, the student will be examined on the anatomy of the part dissected, and, if the examination be satisfactory, a certificate to that effect will be given. No fee is required for dissecting material.

PHYSIOLOGY.

In this subject the inductive method will be very largely employed in imparting instruction. The lectures will be illustrated by diagrams, by charts, and by experiments upon the lower animals. The relations between physiology and medical diagnosis will be presented to the student. During the first year the lectures will cover the subjects of general physiology, proximate principles, digestion, absorption, circulation, respiration, excretion, and the general physiology of the nervous system. The lectures upon the subjects will be thorough. At the close of the session there will be an examination which must be passed before the student can take up the second year's work in physiology. During the second year a careful review of the subjects

treated the first year will be made. The physiology of the nervous system, the generative system, and the special senses will be studied. At the completion of the second year's work there will be a final examination in this branch.

CHEMISTRY AND TOXICOLOGY.

The course in chemistry extends through two years. In the first year the lectures are on general chemistry. The laboratory work consists, first, of analytical chemistry, including methods of testing for the metallic poisons; then the common medicinal substances are studied. The student learns methods of chemical manipulation, and the use of apparatus, and also becomes acquainted with the action of reagents and of chemicals upon each other. The course includes the examination of drinking water from a sanitary standpoint, each student making a number of analyses of various wholesome and polluted waters. It concludes with the methods of quantitative analysis, which are of the most use to the medical practitioner.

In the second year physiological chemistry is taken up. The lectures are in explanation and amplification of the laboratory work. The latter includes the study of the proximate principles of the body and their chemical changes. Experiments in artificial digestion are made, their products being isolated and examined. The constituents of the blood are tested, and the methods for the identification of stains are learned. The qualitative tests for the abnormal constituents of the urine follow, and the quantitative determination of such as are of importance. The course is completed by the identification of urinary sediments and calculi, and the analysis of various pathological specimens of urine.

The lectures on toxicology treat of the physiological and chemical action of the principal poisons, as well as their antidotes. The methods of identifying these in food, excreta, etc., are explained and illustrated by experiments.

The work in practical chemistry is conducted in the Chemical Building of the University, in which the Medical Department occupies rooms on the ground floor. These consist of rooms for the instructors, store-rooms, and two large laboratories. They are well lighted and heated by steam. Ventilating shafts remove offensive and injurious gases. The outfit is ample for demonstrating the general principles of chemistry, as well as its application to medicine. Each student is supplied with a set of the necessary apparatus.

HISTOLOGY.

The course in histology extends through the Freshman year and consists of two didactic lectures and four hours laboratory work each week.

The histological laboratory, situated on the first floor, southeast corner of the Medical Building, is well lighted and thoroughly equipped with microscopes and all necessary apparatus for carrying on the work. The laboratory work comprises the preparation and study of microscopic slides showing the minute structure of the different tissues and organs of the body. The slides prepared by each student become his personal property.

Instruction is given in histological technique, hardening, embedding, section-cutting, staining and preparation of material for examination.

During the Sophomore year opportunities are offered to those who wish to work in embryology and special histology.

PHARMACY.

An outline course in pharmacy is specially provided whereby the student may familiarize himself with pharmaceutical processes and the methods of preparing official preparations by actual laboratory practice.

MATERIA MEDICA.

This subject is presented during the Freshman and Sophomore years in progressive form. The introductory topics, such as definitions, dosage, modes and routes of administration of medicines, and prescription writing, with special reference to the detection and avoidance of incompatibilities, will be presented at the beginning of each session before the classes jointly. The further consideration of the subject will be progressive, organic drugs being presented one session, inorganic the next. At the close of each session a test will be given on the topics covered during the session. Toward the close of the Sophomore year the entire subject will be reviewed and a final examination given. During the didactic lectures crude drugs will be presented from time to time illustrative of the subject. All official preparations from the same will be presented and briefly discussed during the course.

THERAPEUTICS.

This branch of pharmacology, recognized as the distinctive scientific division of the subject, will be presented during the Sophomore and Junior years. Both general and special therapeutics will be outlined and discussed with special view to stimu-

late in the student a desire to prosecute methods of original research in the direction of studying the physiological action of drugs. To this end experiments will be made from time to time illustrative of such action upon the lower animals.

PATHOLOGY AND BACTERIOLOGY.

The course in pathology and bacteriology extends through the Sophomore, Junior and Senior years, and is presented by means of didactic lectures and laboratory work. The lectures are devoted to bacteriology and general and special pathology, and are illustrated by means of drawings, preparations from the medical museum, and specimens derived from post-mortem examinations.

The pathological and bacteriological laboratory is situated in the west hall on the second floor of the Medical Building. It is thoroughly equipped with new microscopes of the most modern type, and all apparatus necessary for carrying on every form of bacteriological research. Each student is provided with a table, a microscope, and the necessary staining reagents.

In the Sophomore year the lectures are confined to general pathology and the elementary principles of bacteriology. The laboratory work consists of two hours each week throughout the year, and is illustrative of the didactic lectures, comprising the preparation and study of slides showing the general pathological changes that occur in human tissues. An examination will be held at the close of the year.

In the Junior year the lectures are devoted to the pathology of tumors, and the special pathology of the different organs of the human body. The laboratory work consists of two hours a week throughout the year. It bears a direct relation to the lectures and comprises the preparation and study of slides showing the disease changes that occur in special tissues and organs, including a complete collection of tumors. Furthermore the work embodies the study of the general characteristics of micro-organisms, the preparation of artificial media, and the mounting of slides of the different organisms, with special reference to the pathogenic bacteria that are of interest to medical men. Instruction is also given in the technique of making a post-mortem examination.

A final examination in pathology will be held at the close of the Junior year. During the Senior year two hours each week are devoted to clinical microscopy, and advanced work in pathological histology and bacteriology.

PRACTICE OF MEDICINE.

The Chair of Theory and Practice of Medicine combines didactic and clinical instruction. Many of the subjects treated in the didactic course find illustration in the hospital amphitheatre, and pathological study is facilitated by post-mortem examinations, as well as by wet and dry preparations from the museum.

MEDICAL DIAGNOSIS.

Recitations for the Senior class will be held each week on this subject, the department of medical diagnosis receiving practical treatment in this manner as well as at the clinic. The Sophomore class will receive practical instruction in physical diagnosis including the use and application of all the instruments and methods of precision.

SURGERY.

Surgery is taught didactically in lectures which are reviewed by daily class quiz, with recitation by advanced students on prior work; and practically by actual surgical diagnosis and treatment of patients at the clinic by the members of the Senior class; also by a course of operative surgery for the Senior class in which all surgical operations are performed upon the cadaver. One hour each week is devoted to minor surgery and bandaging.

OBSTETRICS AND GYNECOLOGY.

The instruction in these important subjects is complete. All modern means for illustration are employed, and advanced students are carefully trained in the principal obstetric operations.

OPHTHALMOLOGY.

The instruction in this branch combines didactic and clinical teaching. One lecture a week is given in the anatomy, physiology, and pathology of the region involved, and the Wednesday clinic is devoted to the diagnosis and treatment of its diseases. A large number of cases appear at these clinics, and a great many operations of all kinds are performed.

OTOLOGY AND RHINO-LARYNGOLOGY.

The instruction in these branches is given by didactic and clinical teaching, one lecture and one clinic being given each week. Much attention is directed to the methods of examination

and treatment of cases. The ear, nose, and throat clinic being large, students are enabled to become familiar with the use of instruments, while all are allowed to treat patients under the supervision of the instructor. It is the aim of the course to familiarize each student with the normal as well as the pathological conditions of the several organs. The clinic room has been especially fitted up for the work and is in itself complete.

DERMATOLOGY.

This subject is presented partly by lectures and partly in clinics. Advanced students are assigned patients for diagnosis and treatment.

MEDICAL JURISPRUDENCE.

In this important department of medicine, the students receive instruction in those subjects that are essential to the practitioner.

INSANITY.

This subject is discussed as concisely as possible, with the special needs of the general practitioner constantly in view, and the material that appears at the clinic from time to time, during the term, is utilized in illustration. A course of lectures on this subject will be delivered during the latter part of January.

HYGIENE.

Instruction in Hygiene, in addition to that given in the courses of Pathology, Bacteriology and Physiological Chemistry, will consist of a course of twenty-six lectures and recitations. In this course will be considered the predisposing factors of disease; the principles on which immunity depends; the relation of ventilation, water-supply, food, and the disposal of waste to the public health; climatology, heredity, vital statistics and other subjects. A syllabus of the lectures will be available which will contain references to the literature of each subject.

After the session of 1900-1901 Hygiene will be a Junior study.

SPRING COURSES.

BACTERIOLOGY.

Beginning the Thursday after Commencement, at 1:30 P. M., there is given a private course in practical bacteriology, which continues for one month. The laboratory is open daily from 9

A. M. to 6 P. M., and the students become familiar with all the details of bacteriological technique. The number of participants is limited to twenty. To secure a place at a table, \$5 must be paid March 1. The rest of the fee is payable at the opening of the course.

COURSE FOR HEALTH OFFICERS.

A new course is offered, which has been planned to meet the needs of health officers. It consists largely of practical work in the bacteriological and chemical laboratories. The course includes the methods of testing water, air, milk and other adulterated foods, also methods of disinfection and bacteriological tests for typhoid, tuberculosis, diphtheria, etc. The course begins May 1 and closes May 5. The fee is \$10 payable on the day of opening. Since the number of places is limited an early application is desirable.

CLINICS.

The clinics have been well and abundantly supplied with material. The patronage of the hospital, which is open for the reception of patients during the year, is such that a variety of cases is presented for operation and treatment.

Every case is fully utilized as a means of instruction by a system of examination in which advanced students are required to diagnose disease and suggest treatment, before the class, subject to the correction of the clinical teacher. Members of the Senior class examine patients in the hospital wards before the Medical and Surgical clinics. They also visit the wards under the direction of a member of the hospital staff, when opportunity is given to observe dressings, to note the progress of cases, and to make such examinations as may be consistent with the comfort and safety of the patients.

CLINICAL PATIENTS.

Medical cases should be referred to Professor L. W. Littig; surgical cases to Professor W. D. Middleton; gynecological cases to Professor J. R. Guthrie; eye cases to Professor J. W. Dalbey; ear, nose, and throat cases to Professor C. M. Robertson; dermatological cases to Dr. J. B. Kessler.

MEDICAL MUSEUM.

The museum contains a large and interesting collection of morbid and other specimens, furnishing valuable aid to instruction by the large amount of material illustrative of pathological

and normal conditions. This is constantly drawn upon as a means of demonstration.

Physicians are earnestly requested to send to the curator, Dr. W. L. Blerring, any specimens of healthy, morbid, or comparative anatomy. For all such favors due credit will be given by labeling the specimens with the name of the donor before placing them in the museum.

MEDICAL LIBRARY.

The Ranney Memorial Medical Library, consisting of a large number of works especially devoted to insanity and mental diseases, is open for consultation, together with a well selected list of books on general medical subjects to which are added each year the latest works and latest editions. The reading room, which is situated on the third floor of the Medical Building, is supplied with the current medical journals, and will be open every day of the session. Medical students have also the privilege of drawing books from the general library of the University.

OUTLINE OF THE COURSE.

FRESHMAN YEAR.

LECTURES AND RECITATIONS, EACH WEEK.

Anatomy—Four lectures; one recitation.

Physiology—Three lectures; one recitation.

General Chemistry—Three lectures; one recitation.

Materia Medica—Organic: two lectures; one recitation.

Histology—Two lectures; one recitation.

Laboratory work for the session as follows:

Chemistry—One hundred and eighty hours.

Biology and Histology—One hundred hours.

Bandaging—Twenty hours.

Dissecting—Two courses.

Final examination in General Chemistry and Histology, also examination (not final) in Physiology, Anatomy, and Materia Medica.

SOPHOMORE YEAR.

LECTURES AND RECITATIONS, EACH WEEK.

Anatomy—Four lectures; one recitation before holidays, two after holidays.

Physiology—Three lectures; one recitation before holidays, two after holidays.

Physiological Chemistry—Two lectures.

General Pathology and Bacteriology—Two lectures; one recitation.

Materia Medica—Inorganic: one lecture until holidays.

Therapeutics—One lecture after holidays.

Medical Diagnosis—One hour.

Pharmacy—Ten lectures during the session.

Laboratory work for the term as follows:

Physiological Chemistry—Sixty hours.

General Pathology—Fifty hours.

Dissecting—Two courses.

Pharmacy—Thirty hours.

Embryology—Optional.

General University Clinics, when not otherwise engaged.

Final examination in Anatomy, Physiological Chemistry, Physiology, Materia Medica, and General Pathology.

JUNIOR YEAR.

LECTURES, RECITATIONS, AND CLINICS, EACH WEEK.

Theory and Practice of Medicine—Four lectures; one recitation.

Surgery—Three lectures; one recitation.

Pathology—Two lectures; one recitation.

Therapeutics—Two lectures.

Obstetrics—Two lectures; one recitation.

Gynecology—One lecture; one recitation.

Toxicology—One lecture.

Applied Anatomy: Medical, Surgical, and Nervous—One lecture.

Special Physiology—Twelve lectures during the session.

General Medical, Surgical, Gynecological, and Ophthalmological Clinics—Ten hours.

Laboratory work for the term as follows:

Pathology—Fifty-two hours.

Bacteriology—Twenty-six hours.

Examination in Obstetrics (not final), Therapeutics, and Special Pathology.

SENIOR YEAR.

LECTURES, RECITATIONS, AND CLINICS, EACH WEEK.

Theory and Practice of Medicine—Four lectures; one recitation.

Surgery—Three lectures; one recitation.

Obstetrics—Two lectures.

- Gynecology—One lecture; one recitation.
Ophthalmology—One lecture.
Otology, and Rhino-laryngology—One lecture.
Dermatology—One lecture.
Paediatrics—One lecture after holidays.
Hygiene—One lecture.
Operative Surgery—Twelve hours during the session.
Operative Obstetrics—Twelve hours during the session.
Medical Jurisprudence—Twelve lectures during the session.
Dentistry—Five lectures during the session.
Haematology—Five hours during the session.
Insanity—Twelve lectures during the session.
Bedside Instruction, Surgery and Practice—Two hours.
General medical, Surgical, Gynecological, Ophthalmological,
Dermatological, Otological and Rhino-laryngological Clinics—
Thirteen hours.
- Laboratory work:
Clinical and Medico-legal Microscopy—Twenty-six hours,
during the session.
- Final examination in Practice of Medicine, Surgery, Obstet-
rics, Gynecology, Ophthalmology, Otology and Rhino-Laryngo-
logy.

The following is a specimen programme:

FRESHMAN YEAR.

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9	Physiology Recitation	Histology Recitation	Anatomy	Organic Materia Medica	Histology	Anatomy
9 to 10	Physiology	Physiology	Chemistry	Anatomy	Physiology	Bandaging Sec. I
10 to 11	Bandaging Sec. II	Chemistry	Materia Medica Recitation	Chemistry	10 to 12 Histolog- ical Laborat'y Sec. I	10 to 12 Histolog'y Laborat'y Sec. III
11 to 12	Histology	Anatomy	Organic Materia Medica	Chemistry Recitation	9 to 12 Chemical Laborat'y Sec. II	
1 to 2	1 to 3 Histological Laboratory Sec. I	1 to 3 Histologi- cal Labor- atory Sec. II	1 to 3 Histolog- ical Laborat'y Sec. III		1 to 3:30 Chemical Laborat'y Sec. I	1 to 3 Histolog'y Laborat'y Sec. II
2 to 3						
3 to 4	3:30 to 5:30 Chemical Laboratory Sec. I	3 to 5:30 Chemical Laborat'y Sec. I	3:30 to 5:30 Chemical Laborat'y Sec. II		3:30 to 5:30 Chemical Laborat'y Sec. II	
4 to 5						

SOPHOMORE YEAR.

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8 to 9	8 to 10 Pathological Laboratory Sec. II.	Anatomy	Inorganic Materia Medica	Organic Materia Medica	Physiology Recitation	Physiology
9 to 10		Physiolog- ical Chemistry		Physiology		9 to 11 Patholog- ical Lab'rat'ry Sec. I.
10 to 11			Anatomy	Pathology Recitation	Physiolog- ical Chemistry	
11 to 12	Anatomy.	Physiology	Organic Materia Medica	General Pathology	Anatomy	General Pathology
1 to 2					1:30 to 3 Medical Clinic	
2 to 3	1 to 3:30 Physiological Chemistry Laboratory Sec. I.	Physical Diagnosis	1 to 3:30 Physiolog- ical Chemistry Laborat'y Sec. II.	1:30 to 4 Surgical Clinic		
3 to 4		Obstetrics				
4 to 5		4:30 to 5:30 Obstetrics				

JUNIOR YEAR.

Hour	Monday	Tuesday	Wednesd'y	Thursday	Friday	Saturday
8 to 9	Practice	Practice	Practice	Surgery	Surgery	Practice
9 to 10	Anatomy	9 to 12 <i>Gynecological Clinic</i>	Therapeu- tics		Pathology	Practice Recitation
10 to 11	Pathology			Surgery	10 to 12 <i>Pathological Laboraf'y Sec. II</i>	Physiology after Holidays
11 to 12			Toxicology	Therapeu- tics		
1 to 2	1 to 3 <i>Pathological Laboratory Sec. I</i>	Gyne- cology	1:30 to 3:30 <i>Eye Clinic</i>	1:30 to 4 <i>Surgical Clinic</i>	1:30 to 4 <i>Medical Clinic</i>	
2 to 3						
3 to 4		Obstetrics				
4 to 5		4:30 to 5 Obstetrics	3:30 to 4:30 Therapeu- tics Recitation			

SENIOR YEAR.

Hour	Monday	Tuesday	Wednesd'y	Thursday	Friday	Saturday
8 to 9	Practice	Practice	Practice	Surgery	Surgery	Practice
9 to 10	Practice Recitation	9 to 12 <i>Gynecological Clinic</i>				
10 to 11	Ward Classes		Ophthal- mology	Surgery	10 to 12 <i>Ear, Nose and Throat Clinic</i>	Ward Classes
11 to 12				Surgery Recitation		
1 to 2	Dermatology	Gynecol- Ogy	1:30 to 3:30 <i>Eye Clinic</i>	1:30 to 4 <i>Surgical Clinic</i>	1:30 to 3 <i>Medical Clinic</i>	
2 to 3		Clinical Micro- scopy				
3 to 4	Life Insurance after Holidays	3:30 to 4:30 <i>Diseases of Children</i>			<i>Ear, Nose and Throat</i>	
4 to 5		7 to 8 Operative Obstetrics after Hol'y's				

COMBINED SCIENTIFIC AND MEDICAL COURSE.

Arrangements have been made with the Faculty of the Collegiate Department by which it will be possible for a student to complete the course in Science and the course in the Medical Department in six years, thereby obtaining the degrees of B. S. and M. D. This combined course is especially recommended to all students who intend to enter the profession of medicine.

**COMBINED COURSE LEADING TO THE DEGREES OF B. S.
AND M. D.**

(Subjects printed in italics are to be taken in the Collegiate Department.)

First Year.

German, 5, or *Latin*, 4 or 5.*

Mathematics, 5.

Drawing, 3.

English, 2.

Military Drill, 3.

Second Year.

German, 3, and *English*, 2; or *German*, 3, and *Economics*, 2; or *Latin*, 5; or *Greek*, 5.

Physics, 5.

Animal Morphology and Physiology, 5; or *Systematic Zoology*, 5.

Military Drill, 3.

Third Year.

French, 5; or *Greek*, 5; or *Latin*, 5. (At least one year of *Latin* required.)

Animal Morphology and Physiology, 5; or

Botany (fall and winter) and *Histology* (spring), 5.

Chemistry, 5.

Anatomy (fall and winter) and *Dissection*, 5.

Military Drill, 3.

Fourth Year

Anatomy, 5.

Physiology, 4.

Physiological Chemistry, 2, with laboratory work.

General Pathology, 2, with laboratory work, 2.

Materia Medica, 3.

*The figures indicate the number of exercises a week. For a full statement regarding collegiate courses of study see University Catalogue.

Physical Diagnosis, 1.
 Bandaging, 1.
 Pharmacy, 40 hours.
 Dissecting when possible.
 Embryology and Bacteriology (spring).
 Clinics when not otherwise engaged.

Fifth Year.

Junior Medical, with *collegiate electives* in the spring term.

Sixth Year.

Senior Medical, with *collegiate electives* in the spring term.

TEXT-BOOKS AND BOOKS OF REFERENCE.

The following are recommended by the Faculty:

- Medical Dictionary—Gould, Duane, Dunglison.
 Anatomy—Gray, Quain, Gerrish, Morris, Treve's Surgical Applied Anatomy.
 Dissectors—Holden, Heath, Ellis.
 Comparative Anatomy—Wiedersheim, Jeffery Bell, Howell.
 Physiology—Kirk, Hall, Stewart, American Text-Book.
 General Chemistry—Simon, Bartley, Roscoe, and Schorlemmer.
 Physiological Chemistry—Rockwood, Vaughan and Novy.
 Urine Analysis—Purdy, Neubauer and Vogel, Black.
 Toxicology—Wormley, Taylor .
 Surgery—Park, American Text-Book of Surgery, Roberts, Stimson on Fractures and Dislocations, Wharton's Minor Surgery and Bandaging, Warren's Surgical Pathology, Senn on Tumors, DaCosta.
 Pathology—Stengel, Ziegler, Thoma, Delafield and Prudden, Green.
 Bacteriology—Abbott, McFarland, Park, Crookshank, Sternberg.
 Practice of Medicine—Osler or Tyson, Anders, Strumpel, Wood and Fitz, American Text-Book of Theory and Practice of Medicine, Flint.
 Medical Diagnosis—Vierordt, Musser, DaCosta, Flint.
 Obstetrics—American Text-Book of Obstetrics, Lusk, Davis, Parvin, Leishman, Playfair, King, Dorland.
 Obstetric Surgery—Grandin and Jarmin.
 Embryology—Minot, Manton.

Gynecology—Skene, Thomas and Munde, Garrigues, American Text-Book, Pozzi, Davenport, May's Manual, Clinical Gynecology, Keating and Coe, Dudley.

Materia Medica—White and Wilcox, Potter, Cushny.

Therapeutics—Hare, Wood, Farquharson.

Diseases of Children—Starr's American Text-Book, Holt, J. L. Smith, Goodhart.

Medical Jurisprudence—McClellan's Civil Malpractice, Wharton and Stille, Beck, Eilwell.

Histology—Stoehr, Piersol, Schafer, Stirling.

Ophthalmology—Fuchs, Juler, Noyes, Nettleship on the Eye.

Otology and Rhino-Laryngology—Bosworth, Burnette, Kyle, Bacon, Sajous, Rosa, Buck.

Insanity—Lewis's Text-Book of Mental Diseases, Stearn, Clouston's Mental Disease.

Dermatology—Hardaway, Hyde, Crocker, Jackson, Van Horlingen.

Hygiene—Notter and Firth, Abbott.

Dietetics—Thompson, Pavy.

Text-Books and books of reference can be obtained at an average cost per volume of from \$2.00 to \$5.00, or \$15.00 to \$20.00 per year.

The thorough study of a single text-book in each department is of far greater advantage to the student during his college course than the cursory reading of several. It is therefore advised that a single work in each branch be chosen, using any of the others for reference. The first one of each of the above lists is preferred.

TUITION.

The fee for tuition is \$65 for each year, of which \$40.00 must be paid at the time of registration, and the balance on or before January 10. All fees must be paid when due, to the Secretary of the Board of Regents, William J. Haddock, and students who do not pay these when due will be suspended from the Department until payment has been made.

In the combined course the fees are \$25.00 for each of the first two years in the Collegiate Department, and \$75.00 for each of the last four years of the course, paid as medical fees. Students entering the Medical Department from other schools with advanced standing will pay \$10.00 for dissecting material used in making up deficiencies in this branch. For students taking a partial course the fees are \$10.00 per year for each branch except dissecting where the fee is \$15.00.

There are no extra fees whatever, but for each laboratory course in chemistry, also for that in practical pharmacy, there

is required a deposit of \$3.00 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student on presentation of the certificate of the professor in charge of the laboratory in question.

The above statement is now in effect, and will be understood to apply to all students in the Department, entirely irrespective of the date of matriculation.

Alumni of the Department will be admitted to lectures and clinics free of charge, but will pay the usual laboratory fees. Graduates of other medical colleges, which are recognized, by this Department, will be admitted to full lecture privileges upon paying the matriculation fee and a fee of \$10.00 with the usual laboratory fees.

A certificate of attendance will be issued to each student at the close of the session.

Students upon arrival will apply for all needed information to the Secretary, Dr. E. W. Rockwood.

REQUIREMENTS FOR ADMISSION.

1. Creditable certificate of good moral character signed by two physicians of good standing in the state from which the applicant comes.

2. Graduates or matriculates of reputable colleges or graduates of normal schools established by state authority or of accredited secondary schools may be admitted without examination upon presentation of satisfactory credentials, provided, that in each case, at least one year of Latin has been included in the course. Graduates from secondary schools must present certificates signed by the Superintendent or the Principal of the school from which they come stating exactly the amount and character of the preparatory work done as indicated by the time spent in the study of each branch, the text-books used and the grades received. Blanks for such certificates will be furnished upon application to the Secretary of the medical department.

In September, 1900, those who have no diploma will be examined in Latin (one year), Physics (one year), English, U. S. History, Arithmetic, Algebra through Quadratics, plane and solid Geometry, and Botany, or some other science. The above examination for admission may be required of each candidate who presents a diploma and certificate from a school now accredited, but not accredited at the time of his graduation. No one will be admitted whose deficiencies exceed the equivalent of two studies for one year. Candidates having deficiencies not exceeding this limit may be admitted to the Freshman class upon

condition that they complete their preparation within the first year after admission. After 1900 the instructors under whose direction the deficiencies are made up must be previously approved by the examiner, and before entrance to the Sophomore class certificates must be presented from such instructors stating that the preparatory work required has been successfully completed as indicated by the number of hours of work done by the student, the text-book used, and the grades received. In case they do not present such certificates they will be examined at the University in the subjects in which they are conditioned at the time fixed for the examination of candidates for admission to the Freshman class.

All candidates for admission should present themselves at the office of the secretary of the medical faculty in the Medical Building not later than noon of Tuesday, September 18, 1900.

3. Students entering from other medical schools with advanced standing must be examined or present credentials as stated above.

This school is a member of the Association of American Medical Colleges, and adheres to the requirements of that Association.

ADVANCED STANDING.

Students from other accredited medical colleges who have attended one course of lectures, will be admitted to the Sophomore class upon passing an examination in the branches taught during the first year.

Those who have attended two courses will be admitted to the Junior class upon passing an examination in the branches taught during the first and second years.

Those who have attended three courses will be admitted to the Senior class upon passing an examination in the branches taught during the first, second, and third years.

Graduates from colleges in good standing, who, during their college course, have devoted regular time to the study of the following branches: Biology, Botany, Chemistry, Physics, Histology, Physiology, and Human Anatomy may be admitted to the second year of the medical course. Students entering under these conditions must take instruction in *Materia Medica* and Pharmacy during the first year of their medical course, and at the end of their first session must pass examinations in all branches of the Freshman year not previously pursued by them. They must also have completed the work required of the Sophomore class in the dissection of the human subject.

In all cases those who enter from other schools with advanced standing must comply with the requirements for admission on page 167.

REQUIREMENTS FOR GRADUATION.

1. The candidate must be twenty-one years of age.
2. He must be known to be of unexceptional moral character.
3. The time of study must include attendance upon at least four full courses of lectures, the last of which must be taken in this institution. The time occupied by each of the four courses of lectures shall not be less than twenty-six weeks, and no two of the four courses shall be within the same year.
4. The candidate must have satisfactorily completed at least four courses in Practical Anatomy.
5. The deportment during the term must have been unexceptionable.
6. Attendance upon all lectures, clinics, and other instruction in the course must have been in accordance with the requirements of the department.
7. All members of the Freshman class will be examined in General Chemistry, Histology, Physiology, Anatomy, and Materia Medica at the end of that year. The examination in General Chemistry and Histology will be final should the student show the required proficiency.
8. Members of the Sophomore class at the end of that year must pass satisfactory examinations in Anatomy, Physiology, Physiological Chemistry, General Pathology, Materia Medica and Pharmacy.
9. Members of the Junior class will be given a final examination at the end of the year in Therapeutics, and Special Pathology.

In case of failure to pass any of these examinations, the student must be re-examined at the opening of the next session. If he fail in this second examination, he will be allowed to present himself for re-examination only after attendance upon another course of lectures. A failure in more than two branches at this September examination will debar the student from admission to a higher class.

Students of the Senior class who are candidates for the degree of Doctor of Medicine must, before March first, present to the Secretary of the Faculty a certificate of legal age and of good moral character.

During the last week of the term, having complied with the other requirements, they must pass a satisfactory examination

in Practice of Medicine, Surgery, Ophthalmology, Obstetrics, Gynecology, Ear, Nose, and Throat and in any other subjects taught, if so directed by the Faculty at the beginning of the term.

Class standing and recitation marks, together with demonstrators' reports and final examinations, will be taken into consideration when determining the candidate's fitness to receive the medical degree.

MEDICAL BUILDING.

The Medical Building is located on the south end of the campus. It is one of the best and most commodious medical college buildings in the west. It comprises a basement for general purposes, the first floor containing the office of the Secretary of the Medical Faculty, professors' rooms, the histological laboratory, a lecture room, and the janitor's room.

On the second floor is a spacious and well-lighted pathological and bacteriological laboratory, prosector's room, and general Faculty room, and a large amphitheater provided with opera chairs for two hundred and sixty-six students. The third floor is divided into a library and reading room, bandaging room and cloak room. The fourth floor (80 x 36 feet), used as a dissecting room, is supplied with sinks and water, and each table is lighted with gas.

The whole building is heated with steam and well ventilated.

UNIVERSITY HOSPITAL.

The Twenty-sixth General Assembly levied a tax for the erection of new buildings for the University, and by the action of the Board of Regents the first year's tax, somewhat more than fifty thousand dollars, has been devoted to the building and equipment of a Hospital which was opened for the reception of patients in January, 1898. The University Hospital is in all respects modern and without a superior in the west. With an administration building thoroughly furnished, with large and commodious wards as well as private rooms, with a clinical amphitheater that will comfortably seat two hundred or more, and with separate surgical, gynecological, medical, ophthalmological, and laryngological operating rooms together with a well supplied Free Dispensary open throughout the year, but little is left to be desired.

It is confidently believed that the students who make the Medical Department of the University the school of their choice will find in all its departments complete and perfect equipment, both for didactic and illustrative instruction.

RESIDENT PHYSICIANS.

Appointments as Resident Physicians in State and other institutions are made each year from the graduates of the Medical Department. These are awarded to such of the applicants as the Faculty judges best prepared for the position, the successful candidates being allowed to select, in the order of their rank, from those positions which are available.

The appointments for the present year are as follows:

John A. Copeland, Samaritan Hospital, Sioux City.

Eutellis A. Cantonwine, University Hospital, Iowa City.

Will F. Speer, Mercy Hospital, Davenport.

Fred J. Jarvis, State Hospital for the Insane, Clarinda.

Board in Iowa City can be obtained for from \$2.00 to \$3.00 a week; rooms from \$2.00 to \$8.00 a month. Many students procure rooms and board in clubs, which materially reduces the cost.

NECESSARY YEARLY EXPENSES.

Tuition fee, which includes all University charges except laboratory breakage.....	\$ 65	\$ 65
Breakage	1 to	2
Room rent, 6 months.....	12 to	48
Board, 26 weeks.....	52 to	78
Fuel and light	6 to	15
Books	12 to	20
<hr/>		
Total	\$148 to	\$228

Graduates of this school are requested to acquaint the Secretary of the Faculty immediately with their postoffice addresses, and to inform him promptly of any change of residence.

For any further information address Dr. E. W. Rockwood, Secretary of the Medical Faculty, Iowa City, Iowa.

UNIVERSITY TRAINING SCHOOL FOR NURSES.

There is connected with the hospital of the Medical Department of the University a School for Nurses which offers a three years' course to women who desire to enter the profession of nursing. Lectures will be delivered during the year by members of the Medical Faculty.

The following is the course of lectures for 1899-1900:

Ethics of Nursing.....	September 20	DR. MIDDLETON
General Observation and Recording of Symptoms.....	September 25, October 2	DR. LITTIG
Materia Medica.....	September 27, October 4, 11, 18 25	DR. CHASE
Bacteriology.....	October 9, 16, 23, 30	DR. BIERRING
Gynecology.....	November 7, 14, 21, 28, December 5	DR. GUTHRIE
Physiology.....	November 6, 13, 20, 27, December 4	DR. DEAN
The Eye.....	December 13, 20	DR. DALBEY
Food and Dietetics.....	December 11, 18, January 8, 15	DR. ROCKWOOD
Ear, Nose and Throat....	January 5, 12	DR. ROBERTSON
Surgery.....	January 17, 24, 31, February 7, 14	DR. MIDDLETON
Obstetrics.....	January 23, 30, February 6, 13, 20	DR. GUTHRIE
Medical Nursing.....	February 26, March 5, 12, 19, 26, April 2, 9, 16	DR. LITTIG
Children.....	February 21, 28, March 7	DR. WHITEIS
Infectious Diseases.....	March 14, 21, April 4, 11, 18	DR. BIERRING
Anatomy.....	April 25, May 2, 9, 16, 23	DR. HARRIMAN
Hygiene—Air and Water.....	April 23, 30	DR. ROCKWOOD
Personal Hygiene and Disinfection.....	May 7, 14	DR. DEAN

The Superintendent will lecture upon Hospital Administration and Ward Management, and will give instruction in Massage. There will also be a complete course in invalid cookery. The lectures will be supplemented by recitations as well as by practical work in the wards and operating room. A diploma will be awarded at the end of the course. Candidates may be admitted when vacancies occur.

For further information application should be made to the Superintendent of the University Hospital, Iowa City, Iowa.

OFFICERS AND ATTENDANTS OF THE
HOSPITAL.

JOHN W. HARRIMAN, M. D.,
Director.

FLORENCE E. BROWN, PH. B.,
Superintendent.

JOHN R. GARDNER, M. D.,
Resident Physician.

NURSES.

First Year.

Antonia Epeneter.

Mary Holden.

Myrta Knowles, M. D.

Laura Long.

Olive Phyllis Howie.

Second Year.

Mabel A. Black.

Ethel Hill.

Margaret Sallor.

Third Year.

Agnes Allen.

Letta Moore.

Wilhelmina Blim.

Esther McCormick.

Maud B. Hayford.

Edith E. White.



HOMŒOPATHIC MEDICAL DEPARTMENT.

FACULTY AND ASSISTANTS.

GEORGE E. MACLEAN, Ph. D., LL. D.,

President of the University.

JAMES G. GILCHRIST, A. M., M. D.,

Professor of Surgery and Surgical Gynecology. Registrar.

CHARLES H. COGSWELL, M. D.,

Professor of Obstetrics and Diseases of Women.

FRANK J. NEWBERRY, M. S., M. D., O. et A. Chir.,

Professor of Ophthalmology, Otology, Physical Diagnosis, and Diseases of the Respiratory Tract.

GEORGE ROYAL, M. D.,

Professor of Materia Medica and Therapeutics. Dean.

FREDERICK BECKER, M. D.,

Professor of Theory and Practice.

THEODORE L. HAZARD, M. D.

Assistant to the Chair of Materia Medica.

ALPHEUS L. POLLARD, M. D.,

Assistant to the Chair of Obstetrics.

RAYMOND E. PECK, M. D.,

Assistant to the Chair of Surgery.

LEORA JOHNSON, M. D.,

Clinical Assistant to the Chair of Surgery.

BENJAMIN R. JOHNSTON, M. D.,

Assistant to the Chair of Theory and Practice.

WILLIAM L. BYWATER, M. D.,

Assistant to the Chair of Ophthalmology, Otology, Physical Diagnosis, and Diseases of the Respiratory Tract.

PAUL G. EILERS, M. D.,

House Surgeon.

MARY A. RAFF,

Hospital Matron.

ADDITIONAL INSTRUCTORS FROM THE MEDICAL
DEPARTMENT.

JOHN W. HARRIMAN, M. D.,

Professor of Anatomy.

ELBERT W. ROCKWOOD, A. M., M. D.,

Professor of Chemistry and Toxicology.

WALTER L. BIERRING, M. D.,

Professor of Pathology.

WILLIAM R. WHITEIS, M. S., M. D.,

Professor of Histology.

LEE WALLACE DEAN, M. S., M. D.,

Professor of Physiology.

W. E. BARLOW, B. A.,

Demonstrator of Chemistry.

JOHN THOMAS MCCLINTOCK, A. B., M. D.,

Demonstrator of Anatomy.

WILBER JOHN TEETERS, B. S., PH. C.,

Demonstrator of Chemistry.

GERSHOM H. HILL, A. B., M. D.,

(Superintendent of the Hospital for the Insane at Independence.
Lecturer on Insanity).

Lecturer on Medical Jurisprudence.

HOMŒOPATHIC MEDICAL DEPARTMENT.

The twenty-fourth annual course of instruction will open on Wednesday, September 18, 1900, and close on Tuesday, April 2, 1901. The opening lecture will be given by Professor Cogswell at 4 p. m., in the amphitheatre. The course of study extends over four years. Men and women are admitted on equal terms, no distinction whatever being made between them. The large and well equipped laboratories in the University, the hospital facilities afforded by the union of the college and hospital under one roof, and the opportunity for collateral study in any department of literature or science, furnish facilities for securing an education in medicine not to be surpassed. Furthermore, a diploma from a University of the first rank has a value that does not attach to that of any private school.

A course has been authorized continuing over six years, which will enable the student to obtain the degree of B. S., in addition to the medical degree. See Combined Scientific and Medical Course in the University Catalogue.

ADMISSION.

The requirements for admission are the same as in all the professional departments of the University, viz: the possession of a diploma from a high school approved by the University, or some equivalent, as the completion of the Freshman year in a college of letters of approved standing, with a sufficient knowledge of Latin. Failing in these requirements, the applicant for admission to the Freshman class must pass an examination in English and Latin sufficient to admit to the Freshman class in the Collegiate Department. Applicants for matriculation must present, to the Registrar, the enclosed certificate as to moral character and fitness for the study of medicine. Applicants for admission to advanced standing must present evidence that they have attended one or more sessions in a reputable medical college and will be admitted to such class as they may prove themselves qualified to enter. All applicants for admission

will apply to the examining committee in the President's office, on Tuesday or Wednesday, September 18 or 19, 1900. If admitted, they will then report for enrollment and assignment of seats at the Registrar's office in the Homoeopathic Medical Building on Dubuque street. All fees must be paid to the Secretary of the Board of Regents, *and to him only*.

Advancement to higher classes is secured only by examination, oral and written, combined with the quiz-record and class standing. A failure to pass in two or more studies will stop advancement until the conditions are satisfied. A failure in one study will not stop advancement, but the student must pass a satisfactory examination in that study before the close of the year to which he is promoted. The Faculty reserves the right to determine the class which any student shall enter, in the case of applicants who have had one or more years in other medical schools.

Graduates in science or arts, also those with degrees in pharmacy or dentistry, from accredited schools, under the requirements of the State Board of Medical Examiners, may be granted advanced standing equal to one year's credit, on a schedule of studies to be determined in each case.

Graduates of non-homoeopathic medical colleges may be admitted as graduate students, as follows: If an *ad eundem* degree is sought they must matriculate in the University, pay a lecture fee, and pass an examination in the therapeutics of the branches taught in this Department. If a degree is not sought, a matriculation fee is to be paid, and such laboratory expenses as may be necessary, together with a lecture fee, if a full course is taken.

Alumni of this school will be admitted to all lectures and clinics free of charge.

By order of the Board of Regents no student will be enrolled until all necessary fees have been paid.

In case any student is unable to pay the fees at the proper time, such student may, under certain conditions, on application to the Dean of the Department, be granted an extension for a short time.

Students who do not pay the proper fees or avail themselves of the provision above mentioned, will be suspended from the Department until such fees are paid.

TUITION FEES.

The fee for tuition is sixty-five dollars (\$65) for each year, to be paid in full at matriculation and registry. There are no extra fees whatever, but for each laboratory course in chemistry, there is required a deposit of \$3 to cover breakage, and to insure

the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student.

The Combined Course in which the degrees of B. S. and M. D. are secured in six years, requires two years in the Collegiate Department, for which the fee is \$25 a year. On completion of the Sophomore year, the student enters the Freshman class in medicine, and the fee is \$75 for each of the last four years of the course.

The above statement of fees is now in effect and will apply to all students in the Department, irrespective of the date of matriculation.

OUTLINE OF THE PLAN OF INSTRUCTION.

FRESHMAN YEAR.

Chemistry. This subject is studied through the Freshman year. The course consists of lectures and laboratory work. The lectures treat first of the general principles of the science; then the subjects of interest to the student of medicine are discussed. Especial attention is paid to the compounds found in the body, with their functions and chemical changes. Poisonous substances and such as are of value in practical work are also considered. In the laboratory the student begins with tests for metals, particularly the poisonous ones, and passes to the analysis of complex substances. He learns the methods of manipulation, and becomes familiar with the properties and actions of reagents. The sanitary examination of water follows, with the analysis of a variety of pure and polluted specimens. The course is concluded with the methods of quantitative analysis which are of most value to the medical practitioner.

Text-books: Simon, Roscoe, and Schorlemmer.

Anatomy. The work in anatomy for the Freshman year will be the study of bones and joints with final examinations on these topics at the close of the term. The anatomy of the intestinal tract and accessory organs will be considered, but this subject will not be completed until the Sophomore year. Two dissections are required in this year, with examinations at the close.

Text-book: Gray.

Physiology. In this subject the inductive method will be very largely employed in imparting instruction. The lectures will be illustrated by diagrams, charts, and by experiments upon the lower animals. The relation between physiology and medical diagnosis will be presented to the student. During the first year

lectures will cover the following subjects: General physiology, proximate principles, digestion, absorption, circulation, respiration, excretion, and the general physiology of the nervous system. The lectures upon these subjects will be thorough. At the close of the session there will be an examination, which must be passed before the student can take up the second year's work in physiology.

Text-books: Landlois and Stirling, Stewart, Kirke, Foster, American Text Book.

Histology. The work in this subject runs through the Freshman year. One lecture a week will be given, many of them being illustrated by means of the stereopticon. Two hours each week are devoted to laboratory work in the new histological laboratory which is commodious, well-lighted, and supplied with thirty-six new compound microscopes, with all necessary accessories, dissecting microscopes, microtomes of various kinds, injecting apparatus, turn-table, etc.

Each student is furnished with microscope, reagents, and apparatus; is taught the use of the microscope; and demonstrates or has demonstrated before him, the general technique of the subject of histology, hardening, embedding, sectioning, staining, mounting, etc.

Histological injections are made before the class. During the term the student prepares for himself a series of slides, illustrating the ultimate distribution of the blood, and cellular structure of normal tissues and organs.

Text-book: Klein's Manual of Histology.

Organon of the Healing Art. Ten lectures on the Organon will be given, with a view to presenting the teachings of Hahnemann on the causes of disease, on methods of proving remedies, on examining the case for therapeutic purposes, as well as on the principles of homeopathy and the application of the law of similars. An examination will be held at the close of the year.

Pharmacology. One hour a week for half of the year will be devoted to the study of the preparation and preservation of drugs, and therapeutic appliances, an examination being required at the close.

Materia Medica. After the Thanksgiving recess, there will be one recitation a week on symptomatology in which Dewey's Essentials of Materia Medica will be used as a text-book. There will be an examination on this subject at the close of the year.

Minor Surgery. Throughout the year, one hour a week, will be used in teaching minor surgery, including the minor surgical

operations, use of instruments, and care of the same. An examination will be held at the close of the year.

Clinica. The various clinical lectures are open to Freshmen, who should attend them, as far as their time will allow. It is desirable that they attend them as regularly as possible, but attendance is not made compulsory.

SOPHOMORE YEAR.

Anatomy. The work of the Freshman year will be thoroughly and carefully reviewed, and in addition the anatomy of the genito-urinary organs, the nervous system, and that of the special senses, will be systematically presented. The teaching will be objective, and every care will be taken to present the subjects in a manner to secure the best results. Two dissections are also required during this year, thus making four in the two years. Further advancement may be secured by an examination on all the work of the year.

Physiology. During the second year a careful review of the subjects treated during the first year will be made. The physiology of the nervous system, the function of generation, and the special senses will be thoroughly and comprehensively taught. Final examinations will be held at the close of the year.

Text-books: The same as in Freshman year.

Chemistry. In the Sophomore year physiological chemistry is taken up. The lectures are in explanation and amplification of the laboratory work. The latter includes the study of the proximate principles of the body and their chemical changes; artificial digestion experiments, with the isolation and study of their products; the properties of the constituents of the blood; the methods of testing stains; and the qualitative and quantitative analysis of urine. The course is completed by the identification of urinary sediments and calculi.

Text-books: Rockwell's Laboratory Manual, Vaughan and Novy.

Pathology and Bacteriology. The course in pathology and bacteriology in the Sophomore year is presented by means of didactic lectures and laboratory work. The lectures are devoted to bacteriology, and general and special pathology, and are illustrated by means of drawings, preparations from the medical museum, and specimens derived from post-mortem examinations.

The pathological and bacteriological laboratory is situated in the west hall on the second floor of the Medical Building. It is thoroughly equipped with new microscopes of the most modern type, and all apparatus necessary for carrying on every form of bacteriological research. Each student is provided with a table, a microscope, and all necessary staining reagents.

In this year the lectures are confined to general pathology and the elementary principles of bacteriology. The laboratory work consists of two hours each week throughout the year, is illustrative of the didactic lectures, and comprises the preparation and study of slides showing the general pathological changes that occur in human tissues. An examination will be held at the close of the year.

Text-books: Pathology—Stengel, Ziegler, Thomas, Delafield and Prudden, Green.

Bacteriology—Abbot, McFarland, Crookshank, Sternberg.

Surgical Emergencies. Two lectures a week, throughout the year, are given on such subjects as anaesthesia, shock, hemorrhage, wounds and traumatism, fractures, dislocations, and other related topics, which include conditions falling to the care of the general medical practitioner. These subjects are carefully and thoroughly presented, great pains being taken to give the student practical instruction. The course is supplemented by one lecture a week, during a portion of the term, on bandaging and surgical dressings of all kinds.

Physical Diagnosis. Lectures are given weekly, throughout the year, upon physical diagnosis, contrasting normal and pathological conditions, particularly of the chest. This includes practice with modern appliances for reaching a correct diagnosis in diseased conditions.

Text-book: Loomis' Physical Diagnosis.

Materia Medica. During this year three lectures a week are given on materia medica and symptomatology. The vegetable remedies will be studied during the session of 1900-1901, with weekly quizzes on the mineral remedies. A brief review of the toxicological and physiological effects of the drug will be given, then the most prominent and characteristic symptoms. These symptoms will be grouped as they have been found useful for therapeutic purposes.

Text-books: Organon, Dewey's Essentials of Materia Medica, Farrington's Clinical Materia Medica, Allen's Hand Book.

Theory and Practice. The teaching will be didactic and clinical. It will be the aim of the occupant of this chair to teach only that which has secured the sanction of competent observers, and which has been confirmed by abundant clinical experience. In teaching the relation of drug pathogenesis to semeiology the well established principles of homoeopathic therapeutics will be closely and consistently followed. Attendance upon clinics will be obligatory. As the lecture-room is under the same roof with the hospital, admirable opportunities for bed-side instructions are furnished.

Text-books: Dickinson's Theory and Practice, Arndt's Practice of Medicine, Raue's Special Pathology, Goodno's Practice; for reference, Pepper's Text-book of Theory and Practice of Medicine.

JUNIOR YEAR.

Anatomy. One hour a week is devoted to surgical and topographical anatomy, fully illustrated. This course is very useful as preparatory to operative surgery and as related to physical diagnosis.

Text-book: Heath's Applied Anatomy.

Pathology. In the Junior year the lectures are devoted to the pathology of tumors, and the special pathology of the different organs of the human body. The laboratory work, consisting of two hours a week throughout the year, bears a direct relation to the lectures, and comprises the preparation and study of slides showing the disease changes that occur in special tissues and organs, including a complete collection of tumors; embodying furthermore the study of the general characteristics of micro-organisms, the preparation of artificial media, and the mounting of slides of the different organisms, with special reference to the pathogenic bacteria that are of great interest to medical men.

Instruction is also given in the technique of making a post-mortem examination.

A final examination in pathology will be held at the close of the Junior year.

Text-books: The same as in Sophomore year.

Toxicology. Instruction in this branch continues through the Junior year. It is given by weekly lectures supplemented by quizzes. The action of the principal poisons is considered, and the antidotes for each are given. The methods of testing for the poisons are explained and illustrated by experiments.

Text-books: Wormley, Taylor.

Physical Diagnosis. One lecture and demonstration a week on physical diagnosis will be given in continuation of the work of the preceding year.

Paedology. Weekly lectures and recitations are given on diseases of children. The subjects taken up are the diseases of infancy, as well as early childhood, and while largely treated by the didactic method, clinical demonstrations are used whenever possible.

Text-books: Tooker, Fisher.

Materia Medica. The work commenced in the preceding year will be continued. Three lectures a week. In addition one hour a week is given to applied therapeutics, in which cases

will be presented (hypothetical or actual), prescribed for, and the indications for the remedies used analytically considered.

Text-books: Farrington's Comparative Materia Medica, Dunham's Therapeutics and Allen's Hand Book.

Ophthalmology and Otolaryngology. During this year the instruction in the diseases of the eye and ear is both didactic and clinical. Special stress is laid upon the diagnosis and treatment of those diseases which will most often present themselves in the work of the general practitioner. The didactic teaching is illustrated by models and drawings. The clinics are large and varied, opportunity being thus given to examine and treat the cases presented.

Text-books: Norton, Buffum, Angell.

Laryngology and Rhinology. Instruction is given in laryngology and rhinology to the Junior class by weekly lectures and clinics. Students are assigned cases for treatment, and given ample opportunity to become expert in the use of the laryngoscope, rhinoscope, and other instruments employed in the diagnosis and treatment of the various diseases.

Text-books: Ivins or Brown.

Obstetrics. This branch is commenced in the Junior year. The plan of instruction will be the usual didactic method supplemented by demonstrations, with wet and dry preparations, models and diagrams, together with clinical practice whenever possible. Two lectures a week are given, with occasional quizzes and recitations. The scheme is designed to carry the student forward, after thorough instruction in the anatomy of the pelvis and generative apparatus, through ovulation and menstruation. The central idea is to give the practical preference over the merely theoretical.

Text-books: Guernsey, Leavitt and Lusk.

Practice. Theory and practice are continued during this year on the general lines already laid down. More prominence is given to clinical instruction, since attendance upon the public clinic is required. The clinical material is abundant and increasing every year; the number and variety of cases presented the last year were very large. Particular effort is made to familiarize the student with such morbid conditions as he is likely to meet in his daily practice.

Text-books: The same as already noted.

Surgical Emergencies. This study is continued during the Junior year, a final examination being held at the close of the term. While all phases of emergency surgery are considered, particular attention is given to fractures and dislocations.

Text-books: Hamilton's Fractures, and Dislocations.

Surgical Pathology. Three lectures a week are given on the science and art of surgery, much stress being laid upon differential diagnosis. The clinical lectures are supplemental to the didactic instruction, and attendance is obligatory.

Text-books: Gilchrist's Surgical Pathology, Adams and Chislett's text-books, Fisher and Macdonald's text-book, American text-book, International text-book.

Clinics. Attendance on all the clinics is required of Junior students.

SENIOR YEAR.

In this year Practice, Obstetrics, Materia Medica, Gynecology, Ophthalmology, Rhinology, Laryngology, and Surgical Pathology will be continued, and final examinations held at the close of the term. In addition the following will be taken up.

Gynecology. This branch is divided between the chair of obstetrics and surgery. Medical diseases of women are considered by the chair of obstetrics during the term, combined with clinics as found feasible. The surgical diseases are treated, throughout the year, by the chair of surgery, by lectures, clinics, and demonstrations.

Text-books: Wood's Gynecology, Southwick's Practical Gynecology.

Operative Surgery. Operations on the cadaver will be made by each student. The operations will be preceded by a short course of lectures on the principles underlying operative treatment, and the legal, professional, personal, and social obligations and amenities of the surgeon.

Applied Therapeutics. Two hours a week are devoted to the study of selected cases, with the purpose of showing the manner of selecting the indicated remedy. This study is carried on in the clinics, where students in this class are required to make diagnosis and prescriptions.

Medical Jurisprudence. A short course is given on forensic medicine by a Professor of the Law Faculty, by appointment, and in such a manner as not to interrupt the regular work of the class. In connection with these lectures the legal status of the medical practitioner, as determined by the various State laws, will be presented and discussed.

Insanity. Alienism and mental disorders, are taught in a short course of lectures, given by appointment.

Obstetrics. This branch is commenced in the Junior year. The plan of instruction will be the usual didactic method supplemented by demonstrations, with wet and dry preparations, models

and diagrams, together with clinical practice whenever possible. Two lectures a week are given, with occasional quizzes and recitations. The scheme is designed to carry the student forward, through gestation, and normal labor. Use of the various instruments is taught on the manikin, and every care taken to prepare the students thoroughly for dealing with complications. Dystochia, and all forms of abnormal gestation and labor, are given in the closing portion of the course.

Text-books: Guernsey, Leavitt and Lusk; Grandin and Jarman, Obstetric Surgery.

CLINICS.

The clinics of this department are open to students of all the classes, but the attendance is not obligatory in the Freshman year. All the clinics are full; in some of them the capacity of the hospital has been severely taxed. The general arrangement and clinical system are as follows: The House Surgeon at the commencement of the term details two students from the Senior class as clinical assistants. One of these retires after one week's service, one after two weeks. One student a week is detailed thereafter, so that each Senior student has two consecutive weeks of clinical work. The duties are to assist at all clinics, and to attend to all dressings in the hospital, under the supervision of the House Surgeon. This gives unusual facilities for practical instruction. In the medical, eye, and ear clinics each member of the Senior class will be given repeated opportunities for examination of patients, and will be required to diagnose the disease and suggest method of treatment. The clinics are largely patronized, the number of cases and the variety being fully equal to the college clinics elsewhere. The clinics are held as follows:

Mondays: Gynecological	Prof. Gilchrist
Tuesday: Eye, Ear, Nose and Throat,	Prof. Newberry
Wednesday: Medical,	Prof. Becker
Thursday: Therapeutic,	Prof. Royal
Friday: Diseases of Women,	Prof. Cogswell
Saturday: General Surgery,	Prof. Gilchrist

Subclinics. The subclinics are held two or more times a week, to which sections of the Senior class are admitted, where opportunity is afforded all to make examinations in gynecological cases, and the use of various instruments of precision for purposes of diagnosis.

Medical and surgical treatment, and nursing are free for patients entering the general clinic. Board in the hospital is furnished for \$7.00 a week.

Correspondence with reference to admission to the clinics or hospital should be had with the professor having charge of the particular clinic, or the Registrar of the Faculty. Arrangements can be made for the reception of a limited number of obstetrical cases, only between the 15th of September and the 15th of March.

Dispensary. In connection with the clinics a dispensary has been opened, where the clinical assistants, under the direction of the Faculty, prescribe for and visit out-patients, as well as attend such cases of obstetrics as apply. The dispensary is growing in patronage and influence, and has become a highly important and profitable portion of the work, affording at once material for the clinics and practical instruction to the attendant.

SCHOOL FOR NURSES.

A training school for nurses has been established by the Board of Regents, the complete course covering three years. The first year is devoted to preliminary studies fitting the pupil for the active work, that is, as nurses in the hospital. Candidates for admission to the Training School must not be under twenty nor over thirty-five years of age, must have a common school education, and must present two letters of recommendation as to their capability, qualifications, and moral character. No other examination for admission will be required.

The first year, covering the preliminary work, begins and closes with the medical term of the University. A fee of five dollars will be charged, payable at the beginning of the term to the Matron of the Hospital. The work of this year is entirely didactic, consisting of lectures upon anatomy, physiology, special nursing in diseases of the eye, ear, nose and throat, and on practical nursing. For cases of emergency and home-nursing, this course is especially desirable. Aside from their practical work, during the second year, the nurses will have one recitation each week, and during the third year special topics for essays will be arranged. Those who have completed the preliminary work, if they are found satisfactory, shall at the end of the first month and during the remainder of the second year in addition to their board receive \$8 a month for personal expenses, with an increase to \$10 during the third year. Those who complete the three years' course will receive a suitable certificate signed by the President of the University and by the Secretary of the Board of Regents. The graduating exercises occur in connection with those of the Department. For further information address the Matron, Homœopathic Hospital of the University.

The schedule of studies for the year 1899-1900 is here given, with a view to showing the arrangement of work. Practical Anatomy in the evenings during the first two years.

FRESHMAN YEAR.

Hour	Monday	Tuesday	Wednesd'y	Thursday	Friday	Saturday
8	Physiology Recitation M B	Histology Recitation M B	Anatomy M B		Histology M B	Anatomy M B
9	Physiology M B	Physiology M B	Chemistry M B	Anatomy M B	Physiology M B	
10		Chemistry M B	Histology Laborat'y M B	Chemistry M B	Histology Laborat'y M B	Prof. Gilchrist Clinic II*
11	Histology Denial Building	Anatomy M B		Chemistry Recitation M B		
1	Dr. Hazard 1:30 to 2:30 I	Prof. Newberry Clinic II*		Prof. Gilchrist II*	Chemical Laborat'y C L	
2						
3			Prof. Becker Clinic II*			
4	Chemical Laboratory 3:30 to 5:30 C L	Chemical Laborat'y 8 to 5:30 C L	Prof. Royal I	Prof. Royal Clinic II*		
5						

SOPHOMORE YEAR.

Hour	Monday	Tuesday	Wednesd'y	Thursday	Friday	Saturday
8	Pathology M B	Anatomy M B		Prof. Royal	Physiology Recitation M B	Physiology M B
9		Chemistry M B	Prof. Newberry II	Physiology M B	Hygiene Med. Dept. Hospital	Prof. Gilchrist Clinic II
10				Pathology Recitation M B	Chemistry M B	
11	Anatomy M B	Physiology M B	Anatomy M B	Pathology M B	Anatomy M B	Pathology M B
1		Prof. Newberry Clinic II*	Chemical Laborat'y 1 to 3 C L	Prof. Royal I*	Patholog- ical Laborat'y 1 to 4 M B	
2				Prof. Gilchrist II*		
3	Prof. Gilchrist II*	Prof. Becker I				
4			Prof. Becker Clinic II*	Prof. Royal Clinic II*		
5						

JUNIOR YEAR.

Hour	Monday	Tuesday	Wednesd'y	Thursday	Friday	Saturday
8		Prof. Becker I		Prof. Royal I	.	
9	Anatomy M B	Dr. Johnston I	Prof. Newberry I	Prof. Cogswell I	Pathology M B	Prof. Gilchrist Clinic II
10	Pathology M B	9 to 11	Prof. Becker I		Prof. Gilchrist II	
11	Prof. Newberry I	Prof. Gilchrist I	Toxicology I	Prof. Royal I	Prof. Newberry II	
1	Pathology Laboratory 1 to 3 M B	Prof. Newberry Clinic II	Prof. Gilchrist II			
2			Prof. Royal I	Prof. Gilchrist II	Prof. Gilchrist Clinic II	
3	Prof. Gilchrist II	Prof. Becker				
4			Prof. Becker Clinic II	Prof. Royal Clinic II		
5						

SENIOR YEAR.

Hour	Monday	Tuesday	Wednesd'y	Thursday	Friday	Saturday
8		Prof. Becker I		Prof. Royal I	Dr. Peck I	
9	Dr. Hasard I	Dr. Johnston I	Prof. Newberry I	Prof. Cogswell I	Prof. Gilchrist II	Prof. Gilchrist Clinic II
10	Prof. Gilchrist I		Prof. Becker I		Prof. Newberry II	
11	Prof. Newberry I	Prof. Gilchrist I	Toxicology I	Prof. Royal I		
1	Special topics by Announcement	Prof. Newberry Clinic I	Prof. Royal II		Prof. Gilchrist Clinic II	
2			Prof. Royal I			
3		Prof. Becker I				
4			Prof. Becker Clinic II	Prof. Royal Clinic II		
5						

NURSES.

Hour	Monday	Tuesday	Wednesd'y	Thursday	Friday	Saturday
1:30	Miss Raff I	Prof. Gilchrist I	Special I	Dr. Eilers III	Prof. Newberry I	

REQUIREMENTS FOR GRADUATION.

1. The candidate must be twenty-one years of age.
2. Moral character must be known to be unexceptionable.
3. The time of study must include attendance upon at least four full courses of lectures, the last of which must be taken in this institution. The time occupied by each of the four courses of lectures shall not be less than twenty-six weeks, and no two of the four courses shall be within the same year.
4. The department during the term must have been unexceptionable.
5. Attendance upon all lectures, clinics, and other instruction in the course must have been in accordance with the requirements of the department.

In case of failure to pass any of the examinations, the student may be re-examined at the opening of the next session. If he fail in this second examination, he will be allowed to present himself for re-examination only after attendance upon another course of lectures.

Students of the Senior class who are candidates for the degree of Doctor of Medicine must, before March first, present to the Secretary of the Faculty a certificate of legal age and of good moral character, also the receipts from the Secretary of the Board of Regents showing that all fees have been paid.

BOARD AND ACCOMMODATIONS.

Good board can be obtained at from \$3 to \$5 a week. By associating in clubs, students may supply themselves with good accommodations at a material reduction from the customary prices.

Students will be furnished with all necessary information concerning rooms and boarding by applying to the Y. M. C. A. Information Bureau.

HOMOEOPATHIC MEDICAL ALUMNI ASSOCIATION.

The Alumni Association held its eleventh annual meeting at the College Building, March 28, 1899, at which time the following officers were elected:

President—E. J. LAMBERT, Ottumwa.

First Vice-President—CLARA M. HAZARD, Iowa City.

Second Vice-President—G. A. YOUNG, Sloux City.

Secretary—P. G. EILERS, Monticello.

Treasurer—W. L. BYWATER, Iowa City.

Executive Committee—PRESIDENT, SECRETARY, AND TREASURER.

Alumni are urged to send their names to the Secretary, to be enrolled as members. A small admission fee is required, the funds so procured to be donated to the hospital according to a vote taken at the last meeting. Alumni are requested to keep the Secretary informed of change of address.

Any further information may be obtained by addressing the President of the University, Registrar of the Homoeopathic Medical Faculty, at Iowa City, Iowa, or the Dean, at Des Moines, Iowa.



DENTAL DEPARTMENT.

FACULTY.

GEORGE E. MACLEAN, Ph. D., LL. D.,
President of the University.

FRANK THOMAS BREENE, M. D., D. D. S.,
Professor of Operative Dentistry and Therapeutics, and Superintendent
of Operative Clinics.

WILLIAM S. HOSFORD, A. B., D. D. S.,
Professor of Prosthetic Dentistry, and Crown and Bridge Work, Superin-
tendent of Prosthetic Clinics, and Dean of the Faculty.

WILLIAM HARPER DEFORD, A. M., M. D., D. D. S.,
Professor of Oral Pathology and Hygiene.

OTHER INSTRUCTORS AND OFFICERS.

WILLIAM DRUMMOND MIDDLETON, A. M., M. D.,
Professor of Surgery and Clinical Surgery.

ELBERT WILLIAM ROCKWOOD, B. S., M. D.,
Professor of Chemistry and Metallurgy.

WALTER LAWRENCE BIERING, M. D.,
Professor of Pathology and Bacteriology.

CHARLES SUMNER CHASE, A. M., M. D.,
Professor of Materia Medica and Therapeutics.

JOHN WALTER HARRIMAN, M. D.,
Professor of Anatomy.

WILLIAM ROBERT WHITEIS, M. S., M. D.,
Professor of Histology.

LEE WALLACE DEAN, M. S., M. D.,
Acting Professor of Physiology.

CHARLES CLEVELAND NUTTING, A. M.,
Lecturer on Comparative Odontography.

E. A. ROGERS, D. D. S.,
Lecturer on Dental Anatomy, and Regional Anatomy and Clinical Demon-
strator.

WILLIAM J. BRADY, D. D. S.,
Lecturer on Orthodontia and Demonstrator of Dental Technology.

- CHARLES B. LEWIS, D. D. S., M. D.,**
Demonstrator of Dental Technology and Clinical Demonstrator.
- A. B. PALMER, D. D. S.,**
Demonstrator of Porcelain Work.
- FRANK B. JAMES, D. D. S.,**
Demonstrator of Dental Technology.
- WILLIAM EDWARD BARLOW, M. A.,**
Demonstrator of Chemistry.
- WILBER JOHN TEETERS, M. S., PH. C.,**
Demonstrator of Chemistry.
- JOHN THOMAS MCCLINTOCK, A. B., M. D.,**
Demonstrator of Anatomy.
- E. A. SPRAKER,**
Custodian.
- HELEN BASCHNAGEL,**
Clerk.

VISITING CLINICAL INSTRUCTORS.

- C. J. PETERSON, D. D. S.,** Dubuque.
- A. R. BEGUN, D. D. S.,** Des Moines.
- C. A. COPE, D. D. S.,** Onawa.
- K. M. FULLERTON, D. D. S.,** Cedar Falls.
- S. C. HATCH, D. D. S.,** Sioux City.
- GUY HUNTLEY, D. D. S.,** Mason City.
- C. A. PALMER, D. D. S.,** Grinnell.
- C. R. BAKER, D. D. S.,** Davenport.

DENTAL DEPARTMENT.

INSTRUCTION in this school is given throughout the academic year by lectures, recitations, clinical teaching, and practical exercises, uniformly distributed. The course of instruction is progressive and extends over three years of nine months each. Some of the studies of the first and second years are pursued in connection with the classes in the Medical Department, the student receiving instruction by the same professors, at the same time and place with the medical students, and at the end of the year passing with them the examination.

It is the object of the Faculty to present a complete course of instruction in theory and practice of Dentistry; and for this purpose well-appointed laboratories and infirmaries are provided and such arrangements made as insure an ample supply of patients. Clinical instruction is given by the professors and other instructors, and under the direction of demonstrators patients are assigned to the students, insuring to all opportunity of operating at the chair, and becoming by actual practice familiar with all the operations demanded of the dentist. The infirmaries remain open, and clinical instructors and demonstrators are in attendance daily throughout the school year, offering to students unsurpassed facilities for acquiring practical knowledge and manipulative dexterity.

REQUIREMENTS FOR ADMISSION.

The applicant must present to the Faculty satisfactory evidence of good moral character, and must pass a preliminary examination, or present a diploma or a certificate of graduation from a college, academy, or high school, or a first class teachers' certificate covering the branches included in rule No. 2 as adopted by the National Association of Dental Faculties. Students of both sexes are admitted on equal terms and are afforded the same facilities for acquiring a thorough dental education.

Extract from Code of Rules of the National Association of Dental College Faculties. Adopted August, 1899.

Sec. 2. The following preliminary examination shall be required of students seeking admission to Colleges recommended by this Association. The minimum preliminary educational requirements of Colleges of this Association for the session of 1900-1901 shall be a certificate of entrance into the second year of a High School, or its equivalent.

The preliminary examination may be placed in the hands of any state or county superintendent of public instruction. The candidate must make a general average of at least seventy-five per cent in this examination; but he may be admitted with one condition, which, however, must be made up during his Freshman year.

ADMISSION TO ADVANCE STANDING.

Students who present certificates of having taken courses in other recognized schools which cover subjects required in this school will be accredited with such studies if satisfactory to the professors in the respective departments.

Admission of Graduates of Medicine. A diploma from a reputable medical college may entitle the holder to enter the second or Junior grade in colleges of the Association subject to other rules governing admission to that grade.

Admission of Graduates of Pharmacy and Veterinary Medicine. Students qualified according to the above heading may matriculate as Juniors subject to other rules governing admission to this grade.

Admission of Undergraduates of Medicine. Undergraduates of reputable medical colleges, who have regularly completed one full scholastic year, having attended at least seventy-five per cent of a five month's term, and passed a satisfactory examination in the studies of the Freshman year, may be admitted to the Junior class, subject to other rules governing admission to that grade.

SCHEDULE OF STUDIES.

First or Freshman Year. Completed the first year: Chemistry, including laboratory, Organic Materia Medica, Histology, including laboratory work, Comparative Anatomy, with Dissection, Dental Anatomy with Technic, and Operative Technic.

Subjects taken the first year and continued through the second year: Anatomy, Physiology, Dental Technology, lectures and laboratory work, and Operative Technic.

Second or Junior Year. Subjects completed the second year: Anatomy with Dissection, Physiology, Organic Chemistry, and

Metallurgy, including laboratory work, Inorganic Materia Medica and Therapeutics, Dental Technology, Special Histology and laboratory work.

Subjects taken the second and continued through the third year: Surgery, Pathology, Therapeutics, Orthodontia Technic, Operative Technic, Operative Dentistry, and Prosthetic Dentistry.

Third or Senior Year. Subjects completed the third year: Oral Surgery, Pathology, Regional Anatomy, Special Histology, Clinical Dentistry, Therapeutics, Dental Art, Special Therapeutics, Practical Bacteriology, Operative Dentistry, Prosthetic Dentistry, Dental Pathology, Hygiene, and Oral Surgery.

All students of the first and second years will be required to pass an examination on the studies pursued in their respective courses before leaving the University at the close of each term. No student who has failed in two of the studies of his course will pass to advanced standing unless these studies are made up before the holiday vacation. No certificates are given to any who fall in more than two branches, except a time certificate stating the actual time of attendance.

Examination in conditional studies will take place the following session, namely, fourth week in September and the second week in January.

COURSE OF LECTURES AND LABORATORY WORK.

OPERATIVE DENTISTRY AND THERAPEUTICS.

To arrest decay and prevent the destruction of human teeth is the ideal work of operative dentistry. To know how to fill teeth well and lastingly is the ambitious desire of every intelligent student of dentistry. In the lectures delivered on this subject the student will be made acquainted with all the useful materials and methods of filling teeth, the use of instruments, and the various manipulations required in a full practice of the operating chair. The same will be fully illustrated and demonstrated by numerous clinics, which will constitute an important feature of the dental instruction. The student is expected to supply himself with such instruments as will enable him to perform all the usual operations of dentistry, under the supervision of the demonstrators. The application of remedies to diseased conditions is taught practically every day upon the patients in the operative clinic. Students who own a dental engine should bring it with them.

CLINICAL DENTISTRY.

In clinical dentistry thorough practical instruction is given in the details of operation, use of materials, instruments, appliances, and the application of remedial agents for the restoration of diseased conditions. The students are required to take charge of patients and perform operations under the supervision of demonstrators. The large number of clinical patients presenting themselves furnishes ample opportunity for a variety of practical work.

PROSTHETIC DENTISTRY.

The instruction in this subject is both didactic and practical. It is the aim to teach not only the mere mechanical processes of Dentistry, but that combination of art with mechanism which enables the practitioner to effect so much in restoring the symmetry of the face and usefulness of the teeth where they have been lost or impaired by accident or disease. Thorough instruction is also given in methods of restoring the dental organs with crowns of metal, or porcelain, by bridges, and by the making of artificial dentures with bases of metal, rubber, celluloid, aluminum, gold, and porcelain, either alone or in combination.

ORAL PATHOLOGY.

The work in oral pathology embraces a brief consideration of inflammation and its terminations, pathological conditions incident to first dentition, pathological conditions incident to second dentition, dental caries—various theories and experiments by which conclusions are reached, individual diseases of the teeth,—sensitive dentine, hyperaemia, congestion and inflammation of the pulp, pulp nodules, putrescent pulps, alveolar abscess, acute and chronic, diseases of the peridental membrane, periodontitis, gingivitis, pyorrhoea alveolaris, the tongue and the mouth in diseases of remote parts, various tumors in and about the mouth especially, the epulic tumors, osteoma, simple cystic tumors, dentigerous cysts, diseases of the antrum, ranula, mouth breathing, alveolar necrosis, maxillary necrosis, phosphor-necrosis, epithelioma, syphilis, particularly mouth manifestations, especially neuralgia and many other Pathological conditions as seen in practice.

HYGIENE.

The importance of this subject cannot be overestimated when it is understood that decay of the teeth, suppuration of the pulp, alveolar dental abscess, pyorrhoea alveolaris, and perhaps other diseases with which dentists have to contend, are the direct result of unhygienic conditions in the oral cavities. The processes of fermentation, suppuration, and infection in general, are considered, and full instruction given in oral, personal, and office hygiene, and in the best methods of disinfection and antiseptics, including the care of the instruments in daily use.

ORAL SURGERY.

The instruction in this subject combines didactic and clinical teaching. Third year students are expected to attend the surgical clinics.

GENERAL PATHOLOGY AND BACTERIOLOGY.

Pathology and bacteriology are taught during the Junior and Senior years by means of lectures and laboratory work. The work in the Junior year is devoted to general pathology, comprising a study of the general pathological changes, such as circulatory disturbances, degenerations, and inflammations, that occur in human tissues. During the Senior year the work consists of special pathology and bacteriology. It includes the study of forms of new growths and the disease changes occurring in special structures, especially the oral tissues and such changes as come within the sphere of dental surgery.

The bacteriological laboratory is equipped with the most improved apparatus for bacteriological investigation. The work comprises the study of the characteristics of micro-organisms of the buccal cavity and their relation to dental caries and other disease processes. The slides prepared become the property of the student.

HISTOLOGY.

Histology is taught during the Freshman and Junior years by means of lectures and laboratory work. The laboratory work comprises the preparing and study of microscopical slides, showing the minute structure of the different tissues and organs of the human body, with special reference to the digestive apparatus. Instruction is given in the various methods of preparing and staining tissues for microscopical examination, the slides prepared becoming the personal property of the student. During the Junior year the work is continued in the form of special dental histology, which is presented by means of didactic lectures and laboratory work. In the laboratory, each student prepares and studies a collection of slides pertaining to the histology of all the dental tissues and softer structures of the buccal cavity, including a complete series showing the development of the teeth, the slides becoming the property of the student.

CHEMISTRY.

The work in chemistry is carried on during two years. It consists of lectures and laboratory work. In the Freshman year the lectures treat of the general principles of the science with special attention to their application to dental operations and the needs of the dental practitioner. The laboratory work is chiefly in qualitative analysis with a view of familiarizing the student with the action of reagents, with chemical manipulations, and with the most important properties of the metals and their compounds.

The lectures of the Junior year will be upon metallurgy and the laboratory work such as shall more fully illustrate the properties of the metals. The methods of refining gold, silver, and platinum will be given, and also those for making and testing alloys and amalgams.

MATERIA MEDICA.

Freshman Year. The Freshman class receives two lectures each week upon the preliminary matter leading to the detailed consideration of drugs proper and organic drugs in particular, inclusive of those of vegetable and animal origin. The preliminary topics include definitions, classification, dosage, routes and

modes of administration of remedies, prescription writing, including incompatibilities, metric and common systems of weights and measures, etc. The second division of the subject, viz., that of organic drugs, takes up their discussion in detail, following a natural and helpful classification based upon the dominant action of a leading drug in each group or class to which such drugs may be assigned. Also the antagonistic and synergistic actions of the drugs are considered in their appropriate places and order. Quizzes, recitations, and written tests are given frequently to aid the student's memory. At the close of the session a review and session-test will be given.

Junior Year. The Junior class completes inorganic materia medica prior to the holiday vacation and reviews the entire subject preparatory to passing the same before the close of the sessional year. After the holidays the class begins general therapeutics, special stress being laid upon those topics that appertain chiefly to dentistry, such as anaesthetics, general and local; coagulants, mineral and vegetable; pain obtunders, sedatives, narcotics, etc. Also such drugs as are comprised in the list of antiseptics, disinfectants, germicides, deodorants, epispastics, escharotics, etc., are specially considered. The consideration of a few of the more prominent and common dental affections, such as abscess of the antrum, alveolar abscesses, pyorrhoea alveolaris, etc., will be briefly discussed from their therapeutic standpoint chiefly. At the close of the year an examination will be given upon this subject as well as that of materia medica.

ANATOMY.

Anatomy is taught in the first and second years by lectures and recitations, one course in dissection being taken each year.

PHYSIOLOGY.

In this subject the inductive method will be very largely employed in imparting instruction. The lectures will be illustrated by diagrams, charts, and by experiments upon the lower animals. The relations between physiology and medical diagnosis will be presented to the student.

During the first year the lectures will cover the subjects: General physiology, proximate principles, digestion, absorption, circulation, respiration, excretion, and the general physiology of the nervous system. The lectures upon these subjects will be thorough. At the close of the session there will be an examination which must be passed before the student can take up the second year's work in physiology.

During the second year a careful review of the subject treated during the first year will be made. The physiology of the

nervous system, the generative system, and the special senses will be studied. At the completion of the second year's work there will be a final examination in this branch.

ORTHODONTIA.

The increasing importance of this branch has led to the establishment of a very thorough and complete course, in which instruction is given by lectures, (illustrated by the stereopticon) and by practical work in the infirmary, which furnishes an abundance of cases. These are cared for by the individual students under the direct supervision of the lecturer on the subject.

REGIONAL ANATOMY.

The instruction in regional anatomy is supplementary to the lectures on general anatomy, and includes a careful description of the bones, muscles, blood vessels, and nerves of the head and face, especially such as are intimately associated with the physiology and pathology of the dental organs. The lectures are illustrated by maps, charts, and models, and by several well prepared natural specimens of the head, jaws, teeth, and nerves *in situ*.

COMPARATIVE ODONTOGRAPHY.

This course is of unusual practical value. The dental organs and their practical use, comprised in the various orders or families of the animal kingdom, are illustrated by natural specimens, lantern exhibitions, and dissection of the lower animals.

DISSECTION.

Early in the term students make application to the demonstrator of anatomy for places at the dissecting table. Each student is required to dissect at least one part in both Freshman and Junior year. No charge is made for material.

DENTAL ANATOMY.

This course is supplementary to the subject of general anatomy, and in addition to hearing lectures, each student prepares a series of sections of the natural teeth, making drawings of the same,—showing outlines of tooth forms, pulp chambers, canals, and the relations of the different structures of a tooth. Carving of some of the typical forms of teeth from different materials is also a part of the course. Instruments for this, and the operative technic course will cost from \$5 to \$10, a list of which will be furnished at the beginning of the term.

PORCELAIN WORK.

The use of porcelain in the various applications to the practice of dentistry is taught, including crowns, bridges, artificial dentures, inlays, etc. Also the use of the various furnaces is demonstrated.

OPERATIVE AND PROSTHETIC TECHNIC.

This course consists of the tempering and making of instruments both for operative and prosthetic work, also the preparation of cavities in the natural teeth out of the mouth and filling of the same with the different filling materials. The course is thoroughly practical and constitutes a very important feature of the student's work preparatory to the clinical experience.

It is the desire of the Faculty that the Dental profession assist in the above course by forwarding to the department all the extracted teeth possible. Express charges will be paid by the department.

DENTAL MUSEUM AND LIBRARY.

Members of the dental profession, dental students, and all persons interested, are invited to contribute to the museum such specimens of malformation, normal or diseased conditions, as will serve for illustration of dental teaching; also to the library any books, pamphlets, journals, or other reading matter pertaining to dental subjects. Such contributions will be duly labeled with the donor's name, and carefully preserved.

LABORATORIES AND CLINIC ROOMS.

The didactic work is supplemented by practical teaching in the laboratory and clinic rooms, with an abundance of patients (5,847 last session). The clinic rooms are equipped fully and completely with Wilkerson and Columbia chairs, cabinets, and all necessary apparatus for the purpose, such as lathes, furnaces for porcelain work, rolling mills, vulcanizers, tables, microscopes, etc. Students are required to supply only the lighter and more portable instruments, the list of which will be furnished on application.

**REQUIREMENTS FOR GRADUATION FOR SESSION OF
1900-1901.**

The candidate for graduation must be of legal age, and of good moral character; must present to the Faculty and Board of Examiners a satisfactory case of artificial dentistry; also the

required clinical record of practical operations on the natural teeth; must sustain a satisfactory examination in the branches taught, and must prove his fitness for the practice of dentistry.

The time of study must include attendance on three courses of lectures, the last of which must be at this institution.

The deportment during the course must have been unexceptionable; and attendance upon all lectures, clinics, and other instruction in the course must have been in accord with the requirements of the department.

Members of the Junior class must be examined finally in anatomy, physiology, organic chemistry, metallurgy, therapeutics and special histology.

Members of the Senior class must notify the Dean of the Faculty in writing during the second week of February of their intention of becoming applicants for the degree of Doctor of Dental Surgery, at the same time presenting a certificate from the Secretary of having paid all fees, with a certificate of legal age and good moral character.

Attendance on any course of lectures in other reputable dental colleges having similar requirements will be accepted as equivalent to a corresponding course in this department. Graduates of medical colleges will be required to attend two full years of instruction in practical dentistry in this institution, including the course of lectures, before applying for graduation.

Having complied with the requirements of this department, the Faculty and Board of Examiners will recommend the candidate to the Board of Regents as entitled to receive the degree of Doctor of Dental Surgery.

TUITION.

The fee for tuition is \$75 for each year, payable \$50 on date of Registration and \$25 on or before January 3. There are no extra fees whatever, but a deposit of \$3 must be made to cover breakage and loss before beginning work in the chemical laboratory.

The above statement of the fees is now in effect, and will be understood to apply to all students in the department, entirely irrespective of the date of matriculation.

PRACTITIONERS' COURSE.

This course is planned for the convenience and benefit of practitioners. It will be optional with those entering the course as to what studies they will pursue, and what methods in practical work they may take up. The curriculum will be arranged more especially to give a thorough course in pulp and abscess

treatment, and other pathological conditions of the oral cavity. In addition to this, detailed instruction will be given in bridge and crown work, continuous gum dentures, porcelain fillings, and in the methods of working metals by all the different operations which the practitioner is called upon to perform.

REQUIREMENTS FOR ADMISSION TO PRACTITIONERS' COURSE.

Anyone in reputable practice may enter this course. Those attending the full course of two months will be given a Practitioner's Certificate at the end of the course. Graduates of this department will be admitted on the payment of the matriculation fee only. Graduates of other reputable dental schools will be admitted on payment of the matriculation fee and \$10.

A full corps of demonstrators in all subjects has been appointed to attend to the duties pertaining thereto. The service of several additional clinical instructors will be obtained during the session, each a specialist.

FEEs FOR PRACTITIONERS' COURSE.

Matriculation fee.....	\$ 5.00
Tickets, including certificates.....	25.00
Laboratory fee.....	6.00
	<hr/>
	\$36.00

DENTAL ASSISTANTS' COURSE.

A training school for dental assistants has been authorized by the Board of Regents. The course will extend through one year of nine months, beginning and ending with the regular dental term. The fee for tuition is \$75 for the course, of which \$50 is payable on date of Registration, and the balance on or before January 3. Candidates for admission to this course must possess a common school education, and must present two letters of recommendation as to their capabilities, qualifications, and moral character. No other examination for admission will be required. Those completing the course will receive a suitable certificate properly signed, and attested by the seal of the University. This course will be both didactic and practical, thorough instruction being given in operative and prosthetic technic, therapeutics, pathology, and dental anatomy; there are also special lectures and work relative to the duties of an assistant both at the operating chair and in the laboratory.

Credits obtained in this course will be allowed to those desiring to attend and complete the regular dental course, providing

Extract from Code of Rules of the National Association of Dental College Faculties. Adopted August, 1899.

SEC. 2. The following preliminary examination shall be required of students seeking admission to Colleges recommended by this Association. The minimum preliminary educational requirements of Colleges of this Association for the session of 1900-1901 shall be a certificate of entrance into the second year of a High School, or its equivalent.

The preliminary examination may be placed in the hands of any state or county superintendent of public instruction. The candidate must make a general average of at least seventy-five per cent in this examination; but he may be admitted with one condition, which, however, must be made up during his Freshman year.

ADMISSION TO ADVANCE STANDING.

Students who present certificates of having taken courses in other recognized schools which cover subjects required in this school will be accredited with such studies if satisfactory to the professors in the respective departments.

Admission of Graduates of Medicine. A diploma from a reputable medical college may entitle the holder to enter the second or Junior grade in colleges of the Association subject to other rules governing admission to that grade.

Admission of Graduates of Pharmacy and Veterinary Medicine. Students qualified according to the above heading may matriculate as Juniors subject to other rules governing admission to this grade.

Admission of Undergraduates of Medicine. Undergraduates of reputable medical colleges, who have regularly completed one full scholastic year, having attended at least seventy-five per cent of a five month's term, and passed a satisfactory examination in the studies of the Freshman year, may be admitted to the Junior class, subject to other rules governing admission to that grade.

SCHEDULE OF STUDIES.

First or Freshman Year. Completed the first year: Chemistry, including laboratory, Organic Materia Medica, Histology, including laboratory work, Comparative Anatomy, with Dissection, Dental Anatomy with Technic, and Operative Technic.

Subjects taken the first year and continued through the second year: Anatomy, Physiology, Dental Technology, lectures and laboratory work, and Operative Technic.

Second or Junior Year. Subjects completed the second year: Anatomy with Dissection, Physiology, Organic Chemistry, and

Metallurgy, including laboratory work, Inorganic Materia Medica and Therapeutics, Dental Technology, Special Histology and laboratory work.

Subjects taken the second and continued through the third year: Surgery, Pathology, Therapeutics, Orthodontia Technic, Operative Technic, Operative Dentistry, and Prosthetic Dentistry.

Third or Senior Year. Subjects completed the third year: Oral Surgery, Pathology, Regional Anatomy, Special Histology, Clinical Dentistry, Therapeutics, Dental Art, Special Therapeutics, Practical Bacteriology, Operative Dentistry, Prosthetic Dentistry, Dental Pathology, Hygiene, and Oral Surgery.

All students of the first and second years will be required to pass an examination on the studies pursued in their respective courses before leaving the University at the close of each term. No student who has failed in two of the studies of his course will pass to advanced standing unless these studies are made up before the holiday vacation. No certificates are given to any who fall in more than two branches, except a time certificate stating the actual time of attendance.

Examination in conditional studies will take place the following session, namely, fourth week in September and the second week in January.

COURSE OF LECTURES AND LABORATORY WORK.

OPERATIVE DENTISTRY AND THERAPEUTICS.

To arrest decay and prevent the destruction of human teeth is the ideal work of operative dentistry. To know how to fill teeth well and lastingly is the ambitious desire of every intelligent student of dentistry. In the lectures delivered on this subject the student will be made acquainted with all the useful materials and methods of filling teeth, the use of instruments, and the various manipulations required in a full practice of the operating chair. The same will be fully illustrated and demonstrated by numerous clinics, which will constitute an important feature of the dental instruction. The student is expected to supply himself with such instruments as will enable him to perform all the usual operations of dentistry, under the supervision of the demonstrators. The application of remedies to diseased conditions is taught practically every day upon the patients in the operative clinic. Students who own a dental engine should bring it with them.

CLINICAL DENTISTRY.

In clinical dentistry through practical instruction is given in the details of operation, use of materials, instruments, appliances, and the application of remedial agents for the restoration of diseased conditions. The students are required to take charge of patients and perform operations under the supervision of demonstrators. The large number of clinical patients presenting themselves furnishes ample opportunity for a variety of practical work.

PROSTHETIC DENTISTRY.

The instruction in this subject is both didactic and practical. It is the aim to teach not only the mere mechanical processes of Dentistry, but that combination of art with mechanism which enables the practitioner to effect so much in restoring the symmetry of the face and usefulness of the teeth where they have been lost or impaired by accident or disease. Thorough instruction is also given in methods of restoring the dental organs with crowns of metal, or porcelain, by bridges, and by the making of artificial dentures with bases of metal, rubber, celluloid, aluminum, gold, and porcelain, either alone or in combination.

ORAL PATHOLOGY.

The work in oral pathology embraces a brief consideration of inflammation and its terminations, pathological conditions incident to first dentition, pathological conditions incident to second dentition, dental caries—various theories and experiments by which conclusions are reached, individual diseases of the teeth,—sensitive dentine, hyperaemia, congestion and inflammation of the pulp, pulp nodules, putrescent pulps, alveolar abscess, acute and chronic, diseases of the peridental membrane, periodontitis, gingivitis, pyorrhoea alveolaris, the tongue and the mouth in diseases of remote parts, various tumors in and about the mouth especially, the epulic tumors, osteoma, simple cystic tumors, dentigerous cysts, diseases of the antrum, ranula, mouth breathing, alveolar necrosis, maxillary necrosis, phosphor-necrosis, epithelioma, syphilis, particularly mouth manifestations, especially neuralgia and many other Pathological conditions as seen in practice.

HYGIENE.

The importance of this subject cannot be overestimated when it is understood that decay of the teeth, suppuration of the pulp, alveolar dental abscess, pyorrhoea alveolaris, and perhaps other diseases with which dentists have to contend, are the direct result of unhygienic conditions in the oral cavities. The processes of fermentation, suppuration, and infection in general, are considered, and full instruction given in oral, personal, and office hygiene, and in the best methods of disinfection and antiseptics, including the care of the instruments in daily use.

ORAL SURGERY.

The instruction in this subject combines didactic and clinical teaching. Third year students are expected to attend the surgical clinics.

GENERAL PATHOLOGY AND BACTERIOLOGY.

Pathology and bacteriology are taught during the Junior and Senior years by means of lectures and laboratory work. The work in the Junior year is devoted to general pathology, comprising a study of the general pathological changes, such as circulatory disturbances, degenerations, and inflammations, that occur in human tissues. During the Senior year the work consists of special pathology and bacteriology. It includes the study of forms of new growths and the disease changes occurring in special structures, especially the oral tissues and such changes as come within the sphere of dental surgery.

The bacteriological laboratory is equipped with the most improved apparatus for bacteriological investigation. The work comprises the study of the characteristics of micro-organisms of the buccal cavity and their relation to dental caries and other disease processes. The slides prepared become the property of the student.

HISTOLOGY.

Histology is taught during the Freshman and Junior years by means of lectures and laboratory work. The laboratory work comprises the preparing and study of microscopical slides, showing the minute structure of the different tissues and organs of the human body, with special reference to the digestive apparatus. Instruction is given in the various methods of preparing and staining tissues for microscopical examination, the slides prepared becoming the personal property of the student. During the Junior year the work is continued in the form of special dental histology, which is presented by means of didactic lectures and laboratory work. In the laboratory, each student prepares and studies a collection of slides pertaining to the histology of all the dental tissues and softer structures of the buccal cavity, including a complete series showing the development of the teeth, the slides becoming the property of the student.

CHEMISTRY.

The work in chemistry is carried on during two years. It consists of lectures and laboratory work. In the Freshman year the lectures treat of the general principles of the science with special attention to their application to dental operations and the needs of the dental practitioner. The laboratory work is chiefly in qualitative analysis with a view of familiarizing the student with the action of reagents, with chemical manipulations, and with the most important properties of the metals and their compounds.

The lectures of the Junior year will be upon metallurgy and the laboratory work such as shall more fully illustrate the properties of the metals. The methods of refining gold, silver, and platinum will be given, and also those for making and testing alloys and amalgams.

MATERIA MEDICA.

Freshman Year. The Freshman class receives two lectures each week upon the preliminary matter leading to the detailed consideration of drugs proper and organic drugs in particular, inclusive of those of vegetable and animal origin. The preliminary topics include definitions, classification, dosage, routes and

modes of administration of remedies, prescription writing, including incompatibilities, metric and common systems of weights and measures, etc. The second division of the subject, viz., that of organic drugs, takes up their discussion in detail, following a natural and helpful classification based upon the dominant action of a leading drug in each group or class to which such drugs may be assigned. Also the antagonistic and synergistic actions of the drugs are considered in their appropriate places and order. Quizzes, recitations, and written tests are given frequently to aid the student's memory. At the close of the session a review and session-test will be given.

Junior Year. The Junior class completes inorganic materia medica prior to the holiday vacation and reviews the entire subject preparatory to passing the same before the close of the sessional year. After the holidays the class begins general therapeutics, special stress being laid upon those topics that appertain chiefly to dentistry, such as anaesthetics, general and local; coagulants, mineral and vegetable; pain obtunders, sedatives, narcotics, etc. Also such drugs as are comprised in the list of antiseptics, disinfectants, germicides, deodorants, epispastics, escharotics, etc., are specially considered. The consideration of a few of the more prominent and common dental affections, such as abscess of the antrum, alveolar abscesses, pyorrhoea alveolaris, etc., will be briefly discussed from their therapeutic standpoint chiefly. At the close of the year an examination will be given upon this subject as well as that of materia medica.

ANATOMY.

Anatomy is taught in the first and second years by lectures and recitations, one course in dissection being taken each year.

PHYSIOLOGY.

In this subject the inductive method will be very largely employed in imparting instruction. The lectures will be illustrated by diagrams, charts, and by experiments upon the lower animals. The relations between physiology and medical diagnosis will be presented to the student.

During the first year the lectures will cover the subjects: General physiology, proximate principles, digestion, absorption, circulation, respiration, excretion, and the general physiology of the nervous system. The lectures upon these subjects will be thorough. At the close of the session there will be an examination which must be passed before the student can take up the second year's work in physiology.

During the second year a careful review of the subject treated during the first year will be made. The physiology of the

nervous system, the generative system, and the special senses will be studied. At the completion of the second year's work there will be a final examination in this branch.

ORTHODONTIA.

The increasing importance of this branch has led to the establishment of a very thorough and complete course, in which instruction is given by lectures, (illustrated by the stereopticon) and by practical work in the infirmary, which furnishes an abundance of cases. These are cared for by the individual students under the direct supervision of the lecturer on the subject.

REGIONAL ANATOMY.

The instruction in regional anatomy is supplementary to the lectures on general anatomy, and includes a careful description of the bones, muscles, blood vessels, and nerves of the head and face, especially such as are intimately associated with the physiology and pathology of the dental organs. The lectures are illustrated by maps, charts, and models, and by several well prepared natural specimens of the head, jaws, teeth, and nerves *in situ*.

COMPARATIVE ODONTOGRAPHY.

This course is of unusual practical value. The dental organs and their practical use, comprised in the various orders or families of the animal kingdom, are illustrated by natural specimens, lantern exhibitions, and dissection of the lower animals.

DISSECTION.

Early in the term students make application to the demonstrator of anatomy for places at the dissecting table. Each student is required to dissect at least one part in both Freshman and Junior year. No charge is made for material.

DENTAL ANATOMY.

This course is supplementary to the subject of general anatomy, and in addition to hearing lectures, each student prepares a series of sections of the natural teeth, making drawings of the same,—showing outlines of tooth forms, pulp chambers, canals, and the relations of the different structures of a tooth. Carving of some of the typical forms of teeth from different materials is also a part of the course. Instruments for this, and the operative technic course will cost from \$5 to \$10, a list of which will be furnished at the beginning of the term.

PORCELAIN WORK.

The use of porcelain in the various applications to the practice of dentistry is taught, including crowns, bridges, artificial dentures, inlays, etc. Also the use of the various furnaces is demonstrated.

OPERATIVE AND PROSTHETIC TECHNIC.

This course consists of the tempering and making of instruments both for operative and prosthetic work, also the preparation of cavities in the natural teeth out of the mouth and filling of the same with the different filling materials. The course is thoroughly practical and constitutes a very important feature of the student's work preparatory to the clinical experience.

It is the desire of the Faculty that the Dental profession assist in the above course by forwarding to the department all the extracted teeth possible. Express charges will be paid by the department.

DENTAL MUSEUM AND LIBRARY.

Members of the dental profession, dental students, and all persons interested, are invited to contribute to the museum such specimens of malformation, normal or diseased conditions, as will serve for illustration of dental teaching; also to the library any books, pamphlets, journals, or other reading matter pertaining to dental subjects. Such contributions will be duly labeled with the donor's name, and carefully preserved.

LABORATORIES AND CLINIC ROOMS.

The didactic work is supplemented by practical teaching in the laboratory and clinic rooms, with an abundance of patients (5,847 last session). The clinic rooms are equipped fully and completely with Wilkerson and Columbia chairs, cabinets, and all necessary apparatus for the purpose, such as lathes, furnaces for porcelain work, rolling mills, vulcanizers, tables, microscopes, etc. Students are required to supply only the lighter and more portable instruments, the list of which will be furnished on application.

**REQUIREMENTS FOR GRADUATION FOR SESSION OF
1900-1901.**

The candidate for graduation must be of legal age, and of good moral character; must present to the Faculty and Board of Examiners a satisfactory case of artificial dentistry; also the

required clinical record of practical operations on the natural teeth; must sustain a satisfactory examination in the branches taught, and must prove his fitness for the practice of dentistry.

The time of study must include attendance on three courses of lectures, the last of which must be at this institution.

The deportment during the course must have been unexceptionable; and attendance upon all lectures, clinics, and other instruction in the course must have been in accord with the requirements of the department.

Members of the Junior class must be examined finally in anatomy, physiology, organic chemistry, metallurgy, therapeutics and special histology.

Members of the Senior class must notify the Dean of the Faculty in writing during the second week of February of their intention of becoming applicants for the degree of Doctor of Dental Surgery, at the same time presenting a certificate from the Secretary of having paid all fees, with a certificate of legal age and good moral character.

Attendance on any course of lectures in other reputable dental colleges having similar requirements will be accepted as equivalent to a corresponding course in this department. Graduates of medical colleges will be required to attend two full years of instruction in practical dentistry in this institution, including the course of lectures, before applying for graduation.

Having complied with the requirements of this department, the Faculty and Board of Examiners will recommend the candidate to the Board of Regents as entitled to receive the degree of Doctor of Dental Surgery.

TUITION.

The fee for tuition is \$75 for each year, payable \$50 on date of Registration and \$25 on or before January 3. There are no extra fees whatever, but a deposit of \$3 must be made to cover breakage and loss before beginning work in the chemical laboratory.

The above statement of the fees is now in effect, and will be understood to apply to all students in the department, entirely irrespective of the date of matriculation.

PRACTITIONERS' COURSE.

This course is planned for the convenience and benefit of practitioners. It will be optional with those entering the course as to what studies they will pursue, and what methods in practical work they may take up. The curriculum will be arranged more especially to give a thorough course in pulp and abscess

treatment, and other pathological conditions of the oral cavity. In addition to this, detailed instruction will be given in bridge and crown work, continuous gum dentures, porcelain fillings, and in the methods of working metals by all the different operations which the practitioner is called upon to perform.

REQUIREMENTS FOR ADMISSION TO PRACTITIONERS' COURSE.

Anyone in reputable practice may enter this course. Those attending the full course of two months will be given a Practitioner's Certificate at the end of the course. Graduates of this department will be admitted on the payment of the matriculation fee only. Graduates of other reputable dental schools will be admitted on payment of the matriculation fee and \$10.

A full corps of demonstrators in all subjects has been appointed to attend to the duties pertaining thereto. The service of several additional clinical instructors will be obtained during the session, each a specialist.

FEEs FOR PRACTITIONERS' COURSE.

Matriculation fee.....	\$ 5.00
Tickets, including certificates.....	25.00
Laboratory fee.....	6.00
	<hr/>
	\$36.00

DENTAL ASSISTANTS' COURSE.

A training school for dental assistants has been authorized by the Board of Regents. The course will extend through one year of nine months, beginning and ending with the regular dental term. The fee for tuition is \$75 for the course, of which \$50 is payable on date of Registration, and the balance on or before January 3. Candidates for admission to this course must possess a common school education, and must present two letters of recommendation as to their capabilities, qualifications, and moral character. No other examination for admission will be required. Those completing the course will receive a suitable certificate properly signed, and attested by the seal of the University. This course will be both didactic and practical, thorough instruction being given in operative and prosthetic technic, therapeutics, pathology, and dental anatomy; there are also special lectures and work relative to the duties of an assistant both at the operating chair and in the laboratory.

Credits obtained in this course will be allowed to those desiring to attend and complete the regular dental course, providing

the requirements are fulfilled as provided for the regular dental course.

PAYMENT OF FEES.

All fees must be paid promptly, when due, to the Secretary of the Board of Regents, William J. Haddock. Students who do not pay the fees when due will be suspended from the department until payment has been made.

BOARD AND ACCOMMODATIONS.

Board in Iowa City can be obtained for from \$2.00 to \$3.00 a week; rooms from \$2.00 to \$8.00 a month. Many students procure rooms, and board in clubs, which materially reduces the cost.

TEXT-BOOKS AND BOOKS OF REFERENCE.

These can be obtained at the bookstores in Iowa City. Dealers give a discount of from ten to twenty per cent. The following are recommended by the Faculty:

Operative Dentistry: American Text-book of Operative Dentistry, Ottellungui, Flagg's Plastics.

Prosthetic Dentistry: Essig's Prosthetic Dentistry, Richardson's Mechanical Dentistry, Evan's Artificial Crown and Bridge Work; collateral reading of Harris's Principle and Practice, American System of Dentistry.

General Pathology: Green, Stengel, Zeigler, Delafield, Prudden.

Bacteriology: Abbott, Crookshank, McFarland.

Histology: Piersol, Schaefer, Stirling, Klein.

Oral Pathology and Hygiene: Greene, Garretson's Oral Surgery, Wilson on Hygiene, Marshall's Diseases of Face, Mouth, and Jaws, Barrett's, Birchard's Dental Pathology.

Chemistry: General Chemistry—Wurtz, Bloxam, Witthaus; Qualitative Analysis—Thorpe, Crafts.

Materia Medica: White and Wilcox, Potter.

Therapeutics: H. C. Wood, Potter, Gorgas.

Anatomy: Gray (13th edition), Holden's Landmarks, Quain (10th edition), Holden's Osteology, McClellan's Regional Anatomy, Treve's Applied Anatomy.

Physiology: Landois and Sterling, Kirk, Stewart, Hall.

Orthodontia: Angles, Gullford.

Dental Anatomy: Tomes, Black.

Comparative Anatomy: Howell.

Dictionaries: Harris, Dunglison, Thomas, Gould.

NOTICE.

The National Association of Dental Faculties, of which this department is a member, has passed a rule whereby all students not regularly matriculated within ten days from the opening of any school will not receive credit for a full course. In case one is prevented by sickness, properly certified to by a reputable physician, from complying with the foregoing rule, the time of admission shall not be later than twenty days from the opening day.

The Dental Department of the State University of Iowa complies not only with the rules and conditions of the National Association of Dental Faculties but also with those of the National Association of Dental Examiners.

Students should make their arrangements to be in attendance on the first day of the session, as the Faculty cannot adjust their plans to the tardy arrival of students by wasting time on unimportant lectures at the beginning. Promptness at the beginning of the term is very essential.

Members of the profession who receive this Catalogue are requested to notify the Secretary of any change in their address. They will also confer a favor by sending the names of other dentists practicing in the towns in which they reside. For further information apply to Wm. S. Hosford, Dean of the Dental Department, Iowa City, Iowa.

DEPARTMENT OF PHARMACY.

FACULTY.

GEORGE EDWIN MACLEAN, PH. D., LL. D.,

President of the University.

EMIL LOUIS BOERNER, PH. G., PHAR. D.,

Professor of Pharmacy, Director of the Pharmaceutical Laboratory and Dean of the Faculty.

LAUNCELOT W. ANDREWS, PH. D.,

Professor of Chemistry, and Director of the Chemical Laboratory.

THOMAS H. MACBRIDE, A. M., PH. D.,

Professor of Pharmacognosy, and Director of the Microscopical Laboratory.

CHARLES S. CHASE, A. M., M. D.,

Professor of Materia Medica.

BOHUMIL SHIMEK, C. E.,

Professor of Botany.

E. W. ROCKWOOD, B. S., M. D.,

Lecturer on Toxicology.

CARL VON ENDE, PH. D.,

Instructor in Chemistry.

FRANK N. BRINK,

Assistant in Chemical Laboratory.

ZADA M. COOPER, PH. G.,

Assistant in the Pharmaceutical Laboratory.

CHARLES G. PARK, PH. G.

Assistant in the Pharmaceutical Laboratory.

DEPARTMENT OF PHARMACY.

THE Department of Pharmacy of the State University of Iowa is designed to furnish pharmacists, and those desiring to engage in pharmacy, an opportunity to acquire a thorough practical education in the departments of science most intimately connected with the practice of that profession. A technical education, such as that offered by the schools of pharmacy, and seldom if ever acquired in drug stores, is as necessary to the accomplished pharmacist as is the special training of a medical course to the physician. The day is not far distant when the pharmacist who is not provided with the evidence of skill which the college diploma furnishes, will labor under equal disadvantages with the non-graduated physician of today.

The experience of the past fourteen years has thoroughly demonstrated the practicability of the courses in this Department. This is shown by the readiness with which students of even one session find and hold employment in drug stores, at salaries much higher than they could possibly command without the college training, and by the fact that a much larger percentage of students who have completed one year's work in this school pass the examinations before the State Board of Pharmacy, than of candidates who go before the Board from drug stores, even after several years' experience.

Incidentally, therefore, the courses are well calculated to aid those who desire specially to qualify for the examinations of the State Board of Pharmacy.

It is the aim of the Faculty to make the courses so practical that students will find it not only professionally but also pecuniarily profitable to spend a season or two in the Department.

Sec. 2589 of the Code, relating to the registration of pharmacists, was amended by the Legislature on March 26, 1898, to read as follows:

Sec. 2589. Examinations—registration. The commission, at such times and places as it may select, and in such manner as it may determine upon, shall examine all persons desiring to engage in and conduct business as registered pharmacists, as contemplated in the preceding section, and, if found competent,

the applicant's name shall be entered in the registry book of certificate holders. Graduates of pharmacy holding a diploma from the State University, or from any school or college of pharmacy requiring a course of study and laboratory work equivalent to that prescribed by the said University in its catalogue for the school year 1897-98, shall be entitled to registration as pharmacists without examination. Pharmacists thus registered have the sole right to keep and sell all medicines and poisons, except intoxicating liquors.

The sixteenth annual course of lectures will begin on Wednesday, September 19, 1900, and close on Wednesday, March 29, 1901. There will be a vacation commencing December 20, 1900, and ending January 2, 1901.

BUILDING.

This school is comfortably located in a three-story building, erected at a cost of about fifty thousand dollars, and furnishing about twenty-five thousand square feet of floor space, perhaps the largest accommodations in the way of room enjoyed by any school of pharmacy in this country. The equipment of this building is of the most modern, and in keeping with the advancing stage of the science. Through liberal appropriations periodically made by the Legislature and Board of Regents, the accumulated equipment of some years is being constantly enlarged, and affords excellent facilities for instruction. The lecture-rooms are provided with all desirable conveniences for class demonstration, and with large tablet chairs. The laboratories are especially roomy, the chemical and pharmaceutical laboratories occupying each a floor space of 54x140 feet, divided into two large general and a number of smaller special laboratories. Two forty-horse power boilers supply the steam for all purposes, and a seven-horse power gas engine furnishes the power for drug mill, dynamo, etc.

PRELIMINARY EXAMINATION.

Every applicant for admission to the Junior class will be required to pass a preliminary examination in English, penmanship, geography, and arithmetic, or give satisfactory evidence of having completed such studies in a grammar school.

Admission to the Senior class will be by examination in the branches of study taught during the Junior year. Students presenting evidence of having passed the Junior examination in another recognised college or school of pharmacy will be admitted without further examination.

COURSES OF INSTRUCTION.

The courses of instruction embrace lectures on pharmacy, materia medica, pharmacognosy, botany, chemistry, and toxicology, with practical work in pharmaceutical, microscopical, and chemical laboratories, and almost daily recitations during the term.

About two-hundred and twenty-five lectures are delivered annually to each of the Junior and Senior classes and more than four hundred hours are devoted by each student to practical work in the several laboratories, and to recitations.

Following the precedent established some years ago by some of the older colleges of pharmacy, the graded course is adopted. The full course extends over two years, and the students are divided into Junior and Senior classes, composed of first and second course students, respectively. This arrangement, while adding greatly to the labors of the Faculty, proves of much benefit to students by enabling the professors not only to introduce new and profitable subjects in their departments, but by extending their lectures over two sessions, to take up the elementary work during the first, and the more advanced during the second year.

PHARMACY.

PROFESSOR BOERNER.

The introductory lectures to the Junior class will embrace a short review of the pharmacopoeias of the United States, England, France, and Germany, the various systems and appliances of weights and measures in use by the leading nations; the apparatus and methods necessary for the determination of the specific gravity of solids and liquids, and the sources and management of heat for pharmaceutical purposes. These will be followed by descriptions and illustrations of apparatus necessary to conduct properly the processes of percolation, filtration, comminution, sifting, solution, precipitation, neutralization, evaporation, distillation, sublimation, etc.

The official drugs will be considered by groups, the classification being based upon the more prominent proximate constituents contained in the drugs under consideration, beginning with those substances containing prominently lignin, and passing in order to those containing starches, sugars, gums, resins, oleo-resins, fixed oils, volatile oils, alkaloids, glucosides, neutral principles, etc. All the preparations of a drug will be considered

together. To aid the student in memorizing the strength of official preparations, these will be considered by pharmacopoeial classifications.

The lectures to the Senior class will begin with a short review of the subjects embraced in the Junior course, followed by a critical study of the preparations of the United States Pharmacopoeia, classified according to the character of their active or medicinal constituents. The relation they sustain to each other will be considered, and whenever practicable, the methods of their preparation will be demonstrated, the aim being to apply the theories and general principles taught in the Junior course.

The concluding lectures of the course will be devoted to extemporaneous pharmacy,—such as the preparation of emulsions, pills, suppositories, solutions, ointments, etc., and the dispensing of physicians' prescriptions, the preparation of toilet articles, perfumery, etc.

The adulteration and sophistication to which official preparations are subject, and the methods for their detection will be noticed to the extent which their importance may demand.

CHEMISTRY.

PROFESSOR ANDREWS.

The laboratory work will be divided into two distinct courses both of which are requisite for graduation, but only one of which can be taken by the student during either of the two college years.

Junior Year. The Junior year comprises instruction in the general principles of chemistry, and in qualitative analysis, arranged with special reference to pharmaceutical preparations.

The lectures elucidate the fundamental laws of the science, demonstrating them, whenever possible, by numerous experiments performed before the class. The chief metallic and non-metallic elements with their more important compounds and reactions are considered. The practical application of the principles of chemical calculation, by which the composition of compounds may be deduced from their formulas, in consequence of its great importance to the pharmacist, is carefully inculcated. Instruction in details of the work, and in matters of manipulation is conveyed in the laboratory course, which occupies, on an average, seven hours a week. Here the student is taught by a systematically arranged series of experiments the properties of the commonest chemical agents, and how to handle chemical apparatus properly. When some manipulative skill is attained, qualitative analysis is taken up. The characteristic reactions of

bodies as applied to their detection in mixtures are made familiar in a series of examples, beginning with the simplest substances, and passing gradually to the more complex, such as are met with in the practice of Pharmacy. The student is expected at the conclusion of this course to be able to test the purity of official preparations and to detect the nature of any adulteration which may be present. He is required to pass a practical examination covering this ground. ●

Senior Year. Quantitative analysis is taken up, particular emphasis being laid upon volumetric processes, as these, by virtue of the ease and rapidity with which they are executed, are of the greatest general usefulness.

The chemical reactions used for detecting morphine, strychnine and other alkaloidal and coal tar products of pharmaceutical importance are studied in the laboratory and the class is exercised in the practical analysis of mixtures of such substances.

Practice is given in the valuation of numerous inorganic and organic pharmaceutical preparations, and in the methods of controlling or determining their exact strength. A laboratory examination concludes the course.

PHARMACOGNOSY.

PROFESSOR MACBRIDE.

This course is intended to present the organic *Materia Medica* from the standpoint of the biologist, with a view to enabling the student to handle his materials intelligently, and to identify them in accordance with the recognized principles of biologic science. The various drugs of organic origin are taken up in the order of their natural classification, the principal facts as to their nature, origin, and preparation are set forth in a series of lectures illustrated by abundant material in original packages, as well as by herbarium specimens (in the case of plants), charts, drawings, microscopic preparations, etc.

Winter. One hour a week, commencing about September 20.

Ample cabinets of *Materia Medica* are at hand, and free use is constantly made of the magnificent collections now found in the Herbarium of the University.

Text-books: Flueckiger's *Principles of Pharmacognosy*; Malsch's *Materia Medica*; Bentley and Trimen's *Medicinal Plants*; Millspaugh's *American Medicinal Plants*; The United States Dispensatory; The National Dispensatory.

BOTANY.

PROFESSOR SHIMEK.

Three courses are offered in Botany:

Course 1. General Botany. This course is devoted to a careful study of the elements of the science. The various organs of the plant are reviewed and the local autumnal flora is made to afford abundant material to illustrate, in the hands of the student, the morphology of roots, stems, and leaves, as well as the ordinary principles of floral analysis, and the means of specific identification. Types of the principal orders of greatest economic value are studied in detail.

Junior Year. Fall term. Two hours a day for the first six weeks.

Course 2. The second course is devoted to an inquiry into the life and growth of the plant; the cell, its morphology and products; the morphology of the entire plant structure as a means of identification. It includes laboratory work with the microscope, and evening lectures illustrated by numerous stereopticon views.

Junior Year. One hour a week during fall and winter terms, following Course 1.

Course 3. Microscopic Technology. This course includes instruction in the use of the compound microscope, and its employment in the investigation of vegetable structures. The student is supplied with an instrument and all necessary reagents and apparatus, and is taught the various modes of cutting, staining and mounting histological preparations. Practical instruction is given in the use of the microscope in the identification of crude drugs as well as in the detection of adulteration. Each student taking this course prepares at the laboratory for his own use, a cabinet of microscopic slides, illustrative of many of the more important official drugs.

Senior Year. Winter term. Two hours a week.

Students in all these courses are afforded ample laboratory facilities, and the splendid botanical collections in the University Herbarium are always available for illustrations and comparative study.

The following list includes the principal text-books: Macbride's Lessons in Elementary Botany; Wood's Class Book of Botany; Gray's Manual of Botany; Goodale's Physiological Botany.

By the liberality of Mr. Jno. M. Lindly, a prize consisting of Britton & Brown's Illustrated Flora is offered to the student of the Senior class who shall bring from his home county the best herbarium of not less than 50 plants; the candidate before receiving the prize must become a member of the University Pharmacy Alumni Association and the collection shall become the property Mr. Lindly.

MATERIA MEDICA.

PROFESSOR CHASE.

This branch will be presented to the students of the Pharmacy Department from a twofold standpoint, namely, that of extemporaneous pharmacy and the prescribing physician. To this end a brief outline course in physiology illustrative of the functions of the more prominent organs of the body will precede the discussion in detail of the subject matter that more properly belongs to this chair. However the professor in charge feels that the pharmacist can best serve those who seek his aid by having a general apprehension of a few of the salient points that belong chiefly to the Physiologist.

Junior Year. The members of the Junior class will be given preliminary definitions of the subject; also various terms such as alkaloids, glucosides, leucomaines, ptomaines, gums, resins, etc., etc. Also the various official preparations will be defined and discussed. The routes and modes of administration of remedies, their physiological and toxicological action will likewise be considered. The origin, source, composition, chemical characteristics, and physical properties, the modes of preparations, etc., of each drug will be noted briefly, their more elaborate consideration being referred to the chair of Pharmacognosy.

The subject of prescription writing, including incompatibles, their classifications, and their instantaneous detection and means of avoidance will be subjects for careful consideration and drill. Cumulative action of drugs in the system—how it may occur and how avoided—will also be discussed. The common and metric systems of weights and measures will receive due attention. Finally with subject of dosage considered at length, the student will be assumed to be ready to be introduced formally to the chief drugs made use of in his profession. To this end organic drugs of both vegetable and animal origin will be first considered. The student will be required to make full and exhaustive notes on each lecture at the time of its delivery, and also present a carefully prepared transcription of the textual matter found in the text-book used. A very excellent and natural grouping of

drugs considered will be followed, based upon the dominant action of the leading drug of the group or class to which such drugs may be assigned. In this manner systematic study is preserved and the subject matter much more easily retained. Frequent quizzing, recitations, and written tests supplement the student's part of the work, thereby facilitating the retention of the facts presented.

Senior Year. This course is an amplification of the preceding. The Senior class is given a rapid review of the subject-matter of the Junior course and then completes the unfinished portion of this part of his work. A brief course in Inorganic Materia Medica is likewise presented to the members of this class, comprising the more important drugs made use of in pharmacy. With frequent reviews, tests, drills, etc., this class will, before the termination of the session, complete the subject, review and pass it. Prescription writing will be dwelt upon in this course as in the preceding year so as to make sight reading and detection of errors possible. The physiological action of drugs is also specially presented, antagonistic and synergistic remedies being noted. Thus with a review of the entire subject, this class is led to a general comprehension of the fundamental principles and knowledge of the leading drugs used in this important branch of their course.

TOXICOLOGY.

PROFESSOR ROCKWOOD.

The course consists of one lecture a week during the entire session. The general action of poisons is first considered, then the most important ones are treated separately. Their physical properties and chemical action are noticed, together with their uses, and most common sources as toxicological agents. The symptoms of the different classes are given, and the treatment for each. Especial attention is paid to antidotes. Methods of testing suspicious substances, as well as the examination of secretions and excretions, are explained and illustrated by experiments.

PHARMACEUTICAL LABORATORY.

The pharmaceutical laboratory, provided with the necessary conveniences, apparatus, and material for thorough practical instruction will be open daily during the greater part of the school year. The instruction will embrace practice in the use of thermometers, hydrometers, specific gravity bottles, and balances; the preparation of tinctures, syrups, oleo-resins, solid

and fluid extracts, pill masses, compound powders, solutions, hypodermic and compressed tablets, and many chemicals, such as the official iron solutions, scale salts of iron, mercury and lead compounds, which the apothecary should and can prepare for himself, both with advantage and profit; extemporaneous pharmacy, including the preparation of emulsions, pills, plasters, suppositories, prescriptions, the application of pharmacopoeial tests, the manufacture of handkerchief extracts, colognes, sachet-powders, etc.; in short, practice in all the varied duties of a first-class pharmacy. The greatly improved facilities of the laboratory building will permit of the introduction of work found impracticable for preceding classes.

Instruction in this branch is now looked upon as one of the utmost importance in pharmaceutical education, especially as much of the work formerly conducted entirely by the apothecary is now in the hands of large manufacturing establishments, and the student in pharmacy is thereby deprived of many valuable opportunities for gaining the necessary experience and self-confidence in drug stores, which a personal acquaintance with the various manipulations is sure to bring about. The instruction in this laboratory will be individual; the progress made will, therefore, depend upon the student's knowledge and exertions.

All students desiring to graduate from this school are required to pursue this course during the Junior and Senior years.

Students will be furnished with all necessary apparatus and material, but will be required to pay for all breakage or damage to apparatus while in their possession.

TUITION.

The fee for tuition is \$75 for each year, of which \$50 is payable on entering, and the remainder on or before January 10. There are no extra fees whatever, but for each laboratory course in chemistry or practical pharmacy there is required a deposit of \$3 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student on presentation of the certificate of the professor in charge of the laboratory in question.

The above statement of fees is now in effect, and will be understood to apply to all students in the Department, entirely irrespective of the date of matriculation.

All fees must be paid to the Secretary of the Board of Regents, William J. Haddock.

All students who are delinquent in the payment of tuition will be suspended from the Department until the tuition is paid.

QUALIFICATIONS FOR GRADUATION.

Every person upon whom the diploma of this Department is conferred must be of good moral character, have arrived at the age of twenty-one years, have attended two full courses of lectures, the last one of which shall have been in this school, including two full courses of pharmaceutical, microscopical, and chemical laboratory practice, and shall pass satisfactory written examinations in all the branches taught in this school, when he shall be entitled to the degree of Graduate in Pharmacy (Ph. G.).

FINAL EXAMINATIONS.

The examinations of candidates for graduation will take place during the week preceding the close of the lecture season.

WEEKLY EXAMINATIONS.

As auxiliary to the lectures, the professors will hold frequent quizzes in their respective departments, to serve as reviews of the subjects discussed in the lectures.

TEXT-BOOKS.

Pharmacy.—For Juniors: U. S. Pharmacopoeia, Remington's Practice of Pharmacy, National Formulary. For Seniors: All the above, Caspari's Treatise on Pharmacy, Coblenz's Handbook of Pharmacy, Scoville's Art of Compounding.

Chemistry.—Pharmaceutical and Medical Chemistry by Sadtler and Trimble.

Pharmacognosy.—Maisch's Organic Materia Medica.

Materia Medica.—White & Wilcox's Materia Medica and Therapeutics, Sayre's Organic Materia Medica and Pharmacognosy, Culbreth's Materia Medica and Pharmacology.

Botany.—Macbride's Lessons in Elementary Botany, Gray's or Wood's Manual, Bastin's College Botany.

REFERENCE BOOKS.

U. S. Dispensatory, National Dispensatory, Fresenius' Analytical Chemistry, Hoffman and Power's Examination of Medicinal Chemicals, Gray's Botanical Text-Book, Vol. II.

BOARD.

The cost of board in clubs is from \$1.50 to \$2.50 per week; in private houses from \$2.50 to \$4.00 per week. Rooms can be obtained at from 50 cents to \$1.50 per week for each student.

LIBRARIES.

The general library of the University is accessible to students of all departments during eight hours of every week-day. Books may also be drawn for outside use.

One hundred and sixty American and European periodicals are taken, and are kept upon the tables of the reading-room throughout the year.

For further particulars address Emil L. Boerner, Dean of the Department of Pharmacy, Iowa City, Iowa.

DEGREES CONFERRED JUNE, 1899.

COLLEGIATE DEPARTMENT.

MASTER OF ARTS.

Anderson, Theodore, Ph. B., LL. B., Parsons, Louis Alexander, A. B.
Horack, Frank E., Ph. B., Thorn, Clifford, J., A. B.

MASTER OF SCIENCE.

Bartsch, Paul, B. S., Burge, Albertus J., B. S.,
Bowman, Charles H., Ph. B., Stull, Wilfred N., B. S.

BACHELOR OF ARTS.

Bowman, John Gabbert	Holt, John Wesley
Bradley, Charles C.	Hughes, Louise E.
Brush, William Burritt	Latta, Frank Elwyn
Curtis, Maurice Leonard	Lorenz, Max Otto
Garrett, Charles Reece	McCormick, John Bernard
Green, Ellen Cecelia	Weldy, Morton E.
Hawk, Ira Tapper	Willett, William
Williams, Charles Allyn	

BACHELOR OF PHILOSOPHY.

Adams, Georgia	Hearst, Mamie Francis
Balle, Julius E.	Horack, H. Claude
Barclay, Wade Crawford	Howard, Libbie C.
Blum, Bertha Marie	Hull, Elmer Clapp
Brink, Frank N.	Humphrey, Charles William
Burt, Alfred James	Jarvis, Calvin W.
Chamberlain, Park	Jones, Lillian
Clapp, Helen Leila	Lambert, J. J.
Coad, Harry Elmer	Lancaster, Henry Hay
Dey, Ann Hull	Larrabee, Helen
Eaton, Ernest T.	Lee, Leslie Parvin
Ehret, Anna Lillian	Lewis, Charles Levi
Eustis, Carrie Luella	Loomis, William W.
Foster, Mabel Marcella	Louis, John Jay
Gilchrist, Helen Cox	McCurdy, Ralph Bruce
Greeley, Lennie Maby	MacFarland, Winifred

Morris, William Robert	Shaffer, Nina R.
Mosnat, H. Roy	Smith, Tillman
Mueller, Herman August	Sogard, John
Myers, Milfred	Stober, Antonie J.
Nelson, John Silford	Stover, George E.
Ogden, John Francis	Swisher, Benjamin Franklyn
Owen, Erza Lois	Thorburn, Andrew Logan
Patterson, James G.	White, Eva May
Peet, Delbert C.	White, Lewis Rush
Riggs, Hattie	Wickersham, Dorothy I.
Roberts, Anna E.	Williams, Fred Almor
Robinson, Jessie	Williams, Mabel Clare

BACHELOR OF SCIENCE.

Blackmore, Ralph Davis	Graff, Lulu A.
Chase, Will Bronk	Ham, John Webb
Codner, Frances T.	Myers, Perry C.
Dalbey, Irvine J.	Rea, Ralph Randolph
Dean, Ray H.	Safley, Agnes Isabel
Eby, Moray L.	Schenk, Erwin
Fee, Louis Waller	Seymour, Edith Maria
Freligh, Clarence Neil	Startsman, Charles Wentworth
Goettsch, Henry Max	Townsend, Egbert Raymond
Weld, LeRoy Dougherty	

BACHELOR OF SCIENCE IN CIVIL ENGINEERING.

Barber, Nathan Brainerd	Clements, Melville Fisk
Bowman, Ernest Charles	Miller, James Franklin
White, Frank G.	

BACHELOR OF DIDACTICS.

Rigg, George B., B. S.

SPECIAL CERTIFICATES.

In German,	In French,
Williams, Charles Allyn,	Clapp, Helen Lella.

LAW DEPARTMENT.

BACHELOR OF LAWS.

Adams, Asa Allen, B. E.	Anderson, Joseph Robert
Ainsworth, Fanny Louise	Anderson, Robinson Gregg, B.S.
Allen, Charles Herbert	Anundsen, Arthur F.
Anderson, Fannie E. Parker, B.S.	Baker, George B.

- Balle, Julius Edinger
 Barker, William Lloyd, Ph. B.
 Barner, Fred Irwin, B. D.
 Belshelm, Gullik Henry
 Berry, Ernest James
 Bulman, Walter Washington
 Carlson, Albert Barnt, B. S.
 Condon, Maurice Francis
 Cray, Samuel Delos
 Dickinson, Lester Jesse, B. S.
 Dilley, Wesley Young, Ph. B.
 Edson, John Truman
 Erickson, Christian
 Eustis, Carl, Ph. B.
 Farber, Edwin U.
 Fee, Thomas Grant
 Fehr, Elmer Lincoln
 Flynn, Leo James
 French, Remington Fred
 Hackler, Charles W., B. A.
 Haddock, Paul Stewart
 Hall, James Frank
 Hanley, Joseph Rhodes
 Harrington, Timothy P.
 Havner, Horace Moore
 Hoag, Lindley Murray
 Holbert, Anna Catharine
 Hollingsworth, Frank, A. B.
 Holly, William Richard
 Hughes, Samuel Judson
 Johnson, Elmer Augustus
 Kennedy, George Washington
 Korf, Henry Christopher
 Lehr, Andrew G., B. L.
 Letts, Dickinson, B. S.
 Lynch, Thomas Finn
 McCord, Robert Leigh, A. B.,
 McBeth, Robert Raymond
 McKee, John William
 Macomber, Charles Coombs, Ph. B.
 Matthews, John R.
 Mattison, George Eaton
 Millen, Emmor Henry
 Miskimins, Sidney Irwin
 Mitchell, Oliver Holmes
 Moothart, John Solomon
 Muekel, Frank Lewis
 Munger, Robert Howe
 Noel, Fred William
 Paisley, Albert Alexander, A. B.
 Patterson, George Elmer
 Phillips, Leon Paul
 Piersol, George Judson, Ph. B.
 Prichett, Edward
 Ross, Joseph Henry
 Sargent, Amor Hartley, Ph. B.
 Smith, Edward A.
 Smith, Ralph J., Ph. B.
 Soper, Erastus Burrows, Jr., A. B.
 Strauss, Oscar, Ph. B.
 Sullivan, Daniel C.
 Talbott, Mina Grant
 Tallman, Jesse Milton, B. S.
 Taylor, James Arthur, B. S.
 Thorn, Clifford J., A. B.
 Threlkeld, Delman
 Turner, Earl James, B. D.
 Underwood, Mount Vernon
 Walker, Gerald Griffin
 Weaver, Abram Cuthbert
 Webber, John Francis
 Weed, Fredmund Casson, A. B.
 Westrope, Norman Scott
 White, Arthur Wellesley, B. S.
 Williams, Augustus Burnside
 Williams, Keota Winona
 Willoughby, Hugh A.

DENTAL DEPARTMENT.

DOCTOR OF DENTAL SURGERY.

Albright, Leroy Clark	Lawrence, William Henry
Baumer, John Baptiste	McGarvey, Loveless Edwin
Booth, John Jacob	Mentzer, Charles J.
Bruce, Guy Rolfe	Morris, Robert E.
Countryman, Charles C.	Oyler, William Seward
Davis, John Clarence	Page, Robert Ray
Davis, John Mackintosh	Penney, Charles L.
Gardner, Herbert H.	Pray, Charles Henry
Gray, Lewis Ballou	Seydel, Samuel Jordan Kirkwood
Hogan, Edmund M.	Stute, Fred Nicholas
Hannafin, Thomas Francis	Tullis, Gerald Freeman
Johnson, Oliver	Warner, Raymond T.
Keeler, Clark C.	Willey, Harry Duane
Kelley, Orange Reo	Williams, Ray O.
Long, John E.	Welsh, James Donald
Lowry, William David	Young, Lillian M.

DEGREES CONFERRED MARCH, 1900.

MEDICAL DEPARTMENT.

DOCTOR OF MEDICINE.

Augustine, Grant	Gray, Howard D.
Bachman, Morris Piper	Hohenschub, Frank Adam
Barker, James Archie, B. Did.	Hollenbeck, Hubert Lewis
Bauer, William John	Meis, Edward William
Binford, William Sherwood	Neff, Mary Lawson, A. B.
Burge, Albertus Joseph, B. S.	Sloan, Arthur Neely
Copeland, John Albert	Stuart, Percy Ernest
Corsaut, James Colvan	Weir, Edward C.
Deters, Willie August	York, Nathan Albert

HOMŒOPATHIC MEDICAL DEPARTMENT.

DOCTOR OF MEDICINE.

Carmichael, Eugene	Hoskins, John B.
Coddington, James K.	Howe, Marion A., B. S.
Eilers, Paul G.	McGarvey, Marie M.
Hamilton, Wm. A.	Rorabaugh, William E.
Hill, Alice S.	Young, Glyndon A.

DEPARTMENT OF PHARMACY.

GRADUATE IN PHARMACY.

Baker, Melvin Franklin	Koltermann, Gustave Herman
Bender, Arthur Clarence	Merckel, Carl Donald
Benesh, Emil	Miller, Frederick William
Carroll, Clara	Opfer, John C.
Grover, Robert Oswald	Severin, Alfred Louis
Hart, Bert	Stansbury, Howard Erskine
Heston, Harry B.	Stump, Wilbur Henry
Kane, William P.	Wise, Harley Louis

COLLEGIATE DEPARTMENT.

GRADUATE STUDENTS.

CANDIDATES FOR DOCTOR'S DEGREE.

Cady, George L., A. B.	Sociology, History of Philosophy.
Merritt, Fred D., B. S., A. M.	Political Economy, Comparative Constitutional Law.
Newberry, Frank, M. S., M. D.	Psychology, Mental Pathology.
Stookey, Stephen W., B.S., M.S.	Zoology, Botany.
Williams, Mabel C., Ph. B.	Psychology, Animal Morphology

RESIDENT CANDIDATES FOR THE MASTER'S DEGREE.

Blackmore, Ralph D., B. S.	Organic Chemistry, Morphology.
Brink, Francis N., Ph. B.	Quantitative Analysis, Qualitative Analysis, French.
Cochrane, Thalia, A. B.	English, German.
Cooper, Clyde B., A. B.	English, French Criticism.
Davis, Arthur W., B. S.	Political Economy, Comparative Constitutional Law.
Donohoe, Anthony P., B. S.	Analytical Chemistry, Philosophy.
Dorcas, Herbert C., Ph. B.	Pedagogy, Psychology.
Ende, August von, B. S.	Mathematics, Physics, Astronomy.
Ensign, Forest C., Ph. B.	Sociology, Pedagogy.
Ferguson, Harry J., B. S.	Government and Administration.
Fitzpatrick, Thomas J., B. S.	Botany, Geology.
Fracker, George C., Ph. B.	Pedagogy, Psychology.
Goetsch, Henry M., B. S.	Organic Chemistry, Physics.
Greeley, Lennie M., Ph. B.	U. S. History, English History.
Hawk, Ira T., A. B.	Sociology, Philosophy.
Hayward, Roy S., Ph. B.	Politics, Economics.
Hull, Elmer C., Ph. B.	History, Politics.
Howe, Marian A., B. S.	Experimental Psychology, Abnormal Psychology.
Lambert, John J., Ph. B.	Morphology, Geology.
Lodwick, Libbie, Ph. B.	Economics, History.
Mosnat, H. Roy, Ph. B.	Geology.
Owen, Erza Lois, Ph. B.	French, English.
Schiefelbein, E. A., B. S.	Economics, U. S. History.

Seymour, Libbie, A. B.	Pedagogy, Sociology.
Shaffer, Nina R., Ph. B.	English, Latin.
Shimek, Bohumil, C. E.	Botany, History.
Stevenson, Marcia J., A. B.	English, American History.
Sturm, Frederick B., A. B.	German, History.
Sweet, Earl C., A. B.	Politics, Economics.
Thomas, Simeon E., Ph. B.	U. S. History, Politics.
Williams, Charles A., A. B.	German, History.
Williams, Mark W., A. B.	Philosophy, Ethics.
Zimmerman, M. Amy, A. B.	English, Latin, Pedagogy.

NON-RESIDENT CANDIDATES FOR THE MASTER'S DEGREE.

Baker, Irving W., Ph. B.	Political Philosophy, U.S. History.
Briggs, George N., A. B.	Pedagogy, U. S. Government.
Brockway, Earle B., A. B.	Philosophy, English Literature.
Brown, Florence E., Ph. B.	Psychology, Morphology.
Brown, S. Joe, A. B.	Politics, Economics.
Cameron, John E.,	Botany, Zoology.
Chamberlain, Park, Ph. B.	American History, Municipal Government.
Clark, Whit H., B. S.	Mathematics, Pedagogy.
Dilley, Wesley Y., Ph. B.	Political Economy, Government.
Eaton, Ernest T., B. S., Ph. B.	History, Psychology.
Gibbs, George S., B. S.	Electricity, Physics.
Hamilton, Arthur S., B. S., M. D.	Psychology, Zoology.
Hanks, John, A. B., B. D.	Comparative Constitutional Law. History.
Hatch, Daisy E., A. B.	English, French.
Hensel, Blanche A., Ph. B.	Latin, Roman Antiquities.
Humphrey, Maude, Ph. B.	Greek Philosophy, Greek History
Howard, Libbie C., Ph. B.	Sociology, U. S. History.
Latta, Frank E., A. B.	Politics, Economics.
Lenocker, Francis E., Ph. B.	Geology, Botany.
Pason, Susan B., Ph. B.	Pedagogy, Latin.
Reever, William H., Ph. B.	U. S. History, Political Science.
Rigg, George B., B. S.	Botany, Morphology.
Sabin, George N., Ph. B.	History.
Sayers, S. Jefferson, Ph. B.	U. S. History, Mediaeval History
Smith, Charles L., A. B.	Central American Plants, History of Botany.
Smith, William A., Ph. B.	Economics, Comparative Constitutional Law.
Weldy, Morton E., A. B.	History and Philosophy.

RESIDENT GRADUATES NOT CANDIDATES FOR AN ADVANCED DEGREE.

Barber, Katherine Brainerd, Ph. B.	Hammond, Juliet, B. A., (Smith)
Butler, Maud Bernadetta, Ph. B.	Humphrey, Charles W., Ph. B.
Cavanagh, Lucy, Ph. B.	Jarvis, Calvin W., Ph. B.
Charlton, Ethel, Ph. B.	Johnson, Leora, M. D.
Coldren, May Belle, Ph. B.	Mosnat, H. Roy, Ph. B.
Cooper, Margaret W., Ph. B.	Myers, Perry C., B. S.
Ely, Mary Barber, Ph. B.	Paine, Katharine, Ph. B.
Gaymon, Leah May, Ph. B.	Sloan, Sam Berkley, Ph. B., (Neb.)
Graff, Lulu A., B. S.	Stevenson, Samuel K., Ph. B.
Greeley, Lennie Maby, Ph. B.	Wickham, Fanny Thompson, Ph. B.

NON-RESIDENT CANDIDATE FOR THE DEGREE OF E. E.

Willis, Bernard D., B. S.	Telephone Engineering.
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SENIOR CLASS.

NAME.	COURSE.	RESIDENCE.
Adams, Wilber H.	Ph.	Iowa City.
Albert, Henry	Sc.	Reinbeck.
Angus, Haney Adelbert	Sc.	Burt.
Baker, Frank Milton	Ph.	Emmetsburg.
Balle, Minnie Marie	Ph.	Denison.
Baughman, Ruby	Cl.	Jefferson.
Beach, Carl Hoff	Sc.	Clarion.
Beard, William Finis	Civ. Eng.	Mt. Union.
Beck, William Edmund	Sc.	Sioux City.
Bels, Jacob Otto	Ph.	Cedar Falls.
Blackmore, Auzman Hodgen	Sc.	Aplington.
Bloom, Myra	Ph.	Iowa City.
Blythe, Edward Ellsworth	Ph.	Williamsburg.
Brockway, Alice R.	Ph.	Iowa City.
Cass, Austin	Ph.	Harlan.
Chamberlain, Will W.	Ph.	Wyoming.
Childs, Hal Augustan	Sc.	Lenox.
Clearman, Hattie M.	Ph.	Iowa City.
Cogswell, Charles Herbert, Jr.	Sc.	Cedar Rapids.
Cole, Arthur Casburn	Ph.	Waterloo.
Consigny, Eugene Frank	Sc.	Avoca.
Daum, Selma A.	Ph.	West Liberty.
Deems, Oren Manfred	Sc.	Burlington.
Eaton, William Hammond	Sc.	Iowa City.
Eddy, Helen M.	Ph.	Marengo.
Egan, George William	Cl.	California.

COLLEGIATE ENROLLMENT.

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NAME.	COURSE.	RESIDENCE.
Fairall, Henrietta	Sc.	Iowa City.
Fairall, Herbert Snowden, Jr.	Sc.	Iowa City.
Fatherson, Thomas W.	Civ Eng.	Keosauqua.
Fellingham, John H.	Cl.	West Side.
Ferson, Merton Leroy	Ph.	Freendale.
Fesenbeck, Ida	Cl.	Danbury.
Fletcher, George H.	Ph.	Cedar Rapids.
Groendycke, Clara Louisa	Sc.	Gracehill.
Harkness, Gordon Follett	Sc.	Iowa City.
Heath, Maggie May	Ph.	Iowa City.
Hensen, Louis	Ph.	Denison.
Hetsel, Clarence Charles	Sc.	Avoca.
Howard, John Raymond	Cl.	Indianola.
Hoffman, William Louis	Ph.	Waterloo.
Hoskins, John Bennett	Cl.	Sioux City.
Howell, Lloyd	Sc.	Iowa City.
Hubbell, Rena	Ph.	Anamosa.
Hunt, Percival	Cl.	Cedar Falls.
Hunter, Lemuel Amos	Civ. Eng.	Iowa City.
Hurst, Margaret Lillian	Ph.	Leon.
Johnson, Mary Gertrude	Cl.	Osage.
Jones, Clyde Ray	Sc.	Charles City.
Kemmerer, T. Wilbert	Sc.	Eldridge.
Kephart, Milton Lawrence	Ph.	Shueyville.
Kindall, Joseph W.	Cl.	Onawa.
Kingland, Thomas A.	Ph.	Mt. Valley.
Klincker, Peter John	Ph.	Denison.
Knapp, Leo	Civ Eng.	Lenox.
Lambert, Byron J.	Ph.	Cedar Falls.
Lasheck, Adelaide Elizabeth	Ph.	Iowa City.
Louis, Edmund J.	Sc.	Atlantic.
Lovell, Guye E.	Ph.	Garner.
McCutchen, Fred Clifton	Ph.	Holstein.
Macomber, Edith Katharine	Ph.	Carroll.
Martin, Worley George	Cl.	Dana.
Mauthe, Katherine	Sc.	Gracehill.
Meggars, Frank Henry, Jr.	Civ. Eng.	Dysart.
Miller, Frank G.	Ph.	Red Oak.
Mitchell, Ernest Roy	Ph.	Ottumwa.
Moulton, Mark Mills	Cl.	Maquoketa.
Newbold, Belle Edna	Sc.	Hillsboro.
Norton, Florence	Sc.	Wilton.
Ogden, Raymond Davis	Ph.	Williamsburg.
Osborn, Winston Charlotte	Ph.	Rippey.

NAME.	COURSE.	RESIDENCE.
Page, Clarence Vernon	Cl.	Iowa City.
Page, Edna-Elizabeth	Cl.	Iowa City.
Park, Elmer Remle	Ph.	Cedar Falls.
Phillips, Albin Blackmore	Sc.	Creamery.
Pinkham, Leda	Ph.	Iowa City.
Polk, Mammie	Cl.	Winterset.
Rall, Edward B.	Cl.	Iowa City.
Reed, William Henry	Cl.	Atlantic.
Remley, Bertha	Ph.	Anamosa.
Remley, James Edward	Ph.	Anamosa.
Roach, Lorin J.	Ph.	Rock Rapids.
Robinson, Alta Aileen	Ph.	Iowa City.
Robish, Albert Arrand	Civ. Eng.	Sumner.
Rogers, Earl Bertram	Sc.	Osage.
Sabin, Edwin LeGrand	Cl.	Iowa City.
Safford, Abbie M.	Sc.	Hamilton, Ill.
Safley, Margaret James	Ph.	Tipton.
Saunders, Herbert C.	Ph.	Manilla.
Savage, Harry Hooper	Ph.	Brighton.
Schoonover, George L.	Ph.	Anamosa.
Schultz, Dorothy M.	Ph.	Burlington.
Shellenberger, Emma White	Ph.	StAnthony'sP.Min
Shuck, May	Ph.	Iowa City.
Sieg, Lee Paul	Sc.	Marshalltown.
Simonton, Thomas Milton	Ph.	Sharon Center.
Speers, Albert Percy	Ph.	Iowa City.
Sprague, Edna Mabel	Ph.	Ft. Dodge.
Springer, William James	Ph.	Decatur City.
Spurgeon, Floris J.	Sc.	Iowa City.
*Stephenson, Winfred Norton	Sc.	Des Moines.
Stockwell, Steven S.	Ph.	Waverly.
Stromsten, Frank Albert	Sc.	Corydon.
Sweeney, Gail	Ph.	Osage.
Switzer, Leslie Edison	Ph.	Iowa City.
Thompson, John Morrow	Ph.	Bedford.
Tuttle, Stella	Sc.	Webster City.
Vaughn, Philip T.	Ph.	Farmersburg.
Waite, Lillian Ethel	Sc.	Iowa City.
Way, Kathryn W.	Ph.	Britt.
Webber, Charles Albert	Cl.	Ferris, Ill.
Wells, Frank	Ph.	Miles,

*Died November 18, 1899.

COLLEGIATE ENROLLMENT.

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NAME.	COURSE.	RESIDENCE.
Werts, Charles M.	Sc.	Russell.
Whitaker, Ellis John	Cl.	Davenport.
Whitmore, Clara B.	Cl.	Fairfield.
Wise, George Chester	Ph.	Wilton Junction.
Wieneke, Laura Anna	Sc.	Iowa City.
Yates, Edward Gilbert	Ph.	Williamsburg.
Yule, Edgar Harrison	Sc.	Tipton.

JUNIOR CLASS.

NAME.	COURSE.	RESIDENCE.
Alden, Henry F.	Cl.	Davenport.
Allin, George R.	Ph.	Iowa City.
Anderson, Laura	Ph.	Iowa City.
Arnold, Henry S.	Ph.	Davis City.
Bailey, Frank Sidney	Ph.	Iowa City.
Bailey, Frederick W.	Sc.	Iowa City.
Ball, George Washington, Jr.	Ph.	Iowa City.
Bannister, Robert J.	Ph.	Ottumwa.
Barton, Harry Raymond	Cl.	Estherville.
Bechley, Edward	Ph.	Searsboro.
Benham, Bessie	Ph.	Shelby.
Birk, Levi Albert	Civ Eng.	Anamosa.
Boardman, Benjamin	Ph.	Portsmouth.
Boler, John	Ph.	Atlantic.
Bond, Perry Avery	Sc.	Sioux City.
Brackett, Otto T.	Sc.	Iowa City.
Bridges, William H.	Ph.	Fonda.
Briggs, Fletcher	Ph.	Nevada.
Brockway, James Madison	Ph.	Iowa City.
Brown, Clarence A.	Sc.	Sioux City.
Buffum, Hugh Straight	Cl.	Le Roy.
Burrier, Emmett Francis	Sc.	Farmington.
Burrus, James H.	Cl.	Winterset.
Burton, Harry E.	Cl.	Onawa.
Byrnes, Ralph L.	Sc.	Iowa City.
Carson, Mabel E.	Cl.	New Sharon.
Chantry, Lillian	Ph.	Malvern.
Clapp, Mortimer Edwy	Sc.	Shelby.
Close, Katherine S.	Ph.	Iowa City.
Collins, Edward Robert	Sc.	Bloomfield.

NAME.	COURSE.	RESIDENCE.
Collins, Frank B.	Ph.	Grundy Center.
Collins, Roy A. Miles	Ph.	Eldora.
Conley, Agnes J. M.	Ph.	New Hampton.
Converse, Charles Crozat	Ph.	Cresco.
Cook, Roy Arthur	Cl.	Independence.
Cox, Clifford Vernard	Ph.	Newton.
Curtis, Cora G.	Ph.	Allison.
Davis, Mabel Florence	Ph.	Sioux City.
Dodds, Calvin Stewart	Ph.	Wyman.
Downing, Ralph V.	Cl.	Wellman.
Drake, Fred Collins	Ph.	Adel.
Dubal, Elinor	Sc.	Iowa City.
Dye, Charles Wesley	Sc.	Macedonia.
Eaton, John Alvin	Civ. Eng.	Creston.
Ede, Ernest D.	Ph.	
Fenton, Jennie Inez	Ph.	Eldora.
Fesenbeck, J. Alvin	Ph.	Danbury.
Frank, W. C.	Ph.	Red Oak.
Gilchrist, Janet Marjorie	Ph.	Iowa City.
Gleason, Fred Brockway	Sc.	Davenport.
Goettsch, Charles	Ph.	Davenport.
Goettsch, Julius	Sc.	Davenport.
Gow, Annie Louise	Ph.	Greenfield.
Gow, James Ellis	Ph.	Greenfield.
Griffith, John George	Sc.	Iowa City.
Greedy, Harriet	Ph.	Farragut.
Hanson, Frank F.	Ph.	Monmouth.
Hershire, Mildred	Ph.	Iowa City.
Hickenlooper, Thomas Wallace C.	Eng.	Albia.
Hoffman, Paul M.	Sc.	Muscatine.
Hoover, Charles E.	Sc.	Peabody, Kan.
Howard, Alice H.	Sc.	Marshalltown.
Hruska, Victoria	Ph.	Spillville.
Hurst, John Francis	Sc.	Leon.
Jensen, Frank Thomas	Civ. Eng.	Dysart.
Johnson, John Edward	Cl.	Iowa City.
Johnson, Jessie Florence	Cl.	Farlin.
Johnson, Kittle May	Ph.	Iowa City.
Jorgenson, James Edwin	Cl.	West Side.
Joy, Florence Livingston	Cl.	Iowa City.
Kelley, Rita Amanda	Ph.	Iowa City.
Kingsbury, Maud Cleaveland	Ph.	Iowa City.
Kuck, Orlando A.	Ph.	Charles City.

COLLEGIATE ENROLLMENT.

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NAME.	COURSE.	RESIDENCE.
Lambert, Charles Irwin	Sc.	Cedar Falls.
McCaffree, Howard A.	Cl.	Waverly Junction
McClain, Donald	Cl.	Iowa City.
McCord, Charles Joseph	Cl.	Iowa City.
McCulla, Walter Philo	Ph.	Sutherland.
McDonald, Charles S.	Cl.	Council Bluffs.
McGee, Alice Florence	Ph.	Iowa City.
McKenzie, John A.	Cl.	Living Springs.
Mason, Ralph Taylor	Ph.	Albia.
Merriau, Fred S.	Cl.	Marble Rock.
Miller, Daniel Fry, Jr.	Cl.	Keokuk.
Miller, John William	Ph.	Manning.
Moore, Lina Haviland	Ph.	Fort Dodge.
Moore, William Franklin	Cl.	Dale.
Noland, Harry B.	Ph.	Cedar Falls.
Otto, Lucia C.	Ph.	Iowa City.
Pearson, Abby B.	Cl.	Dysart.
Perkins, Daniel R.	Ph.	Carson.
Reid, Frank B.	Cl.	Oskaloosa.
Remley, Arthur L.	Ph.	Anamosa.
Remley, George E.	Ph.	Iowa City.
Rice, Stephen E.	Civ. Eng.	Green Mountain.
Rider, Etta J.	Ph.	Mt. Ayr.
Roberts, Carl Eckley	Cl.	Washington.
Rosser, Bert P.	Sc.	Troy.
Rue, Lars O.	Sc.	Ridgeway.
Russell, Earl Willard	Cl.	Adel.
Scales, Elmo Richard	Ph.	Ackley.
Shaw, James Daniel	Ph.	Charles City.
Slavata, Jennie	Sc.	Iowa City.
Smith, C. Horton	Civ. Eng.	Iowa City.
Soesbe, Clarence W.	Cl.	Greene.
Sterling, Editha Hortense	Ph.	Iowa City.
Stover, Bessie E.	Sc.	Iowa City.
Swisher, Esther McDowell	Cl.	Iowa City.
Treimer, Anna	Sc.	Dixon.
Tulloss, Carolyn M.	Ph.	Iowa City.
Tuttle, Lauren Taylor	Ph.	Burlington.
Umberger, T. D. Terrill	Sc.	Burlington.
Voss, Hertha Louise	Ph.	Davenport.
Waller, Mary Ethel	Ph.	Glenwood.
Warren, Madison Clyde	Ph.	Charles City.
Weldy, Nellie E.	Ph.	New Sharon.

NAME.	COURSE.	RESIDENCE.
Williams, Samuel Clyde	Sc.	Iowa City.
Willis, Bertha B.	Ph.	Iowa City.
Willis, Faith Gertrude	Ph.	Iowa City.
Wyant, Richard Moore	Ph.	Sigourney.
Yessler, Joseph Urwin	Cl.	Western College.

SOPHOMORE CLASS.

NAME.	COURSE.	RESIDENCE.
Anderson, Rudolph M.	Ph.	Forest City.
Anthony, Charles Henry	Sc.	Iowa City.
Ashby, Esther Alma	Ph.	Pilotsburg.
Bailey, Edgar	Sc.	Charles City.
Bailey, Katherine Ethel	Ph.	Iowa City.
Baker, Mark Emery	Ph.	Iowa City.
Barber, Myrtle	Ph.	Estherville.
Barrett, Anna Moore	Ph.	Iowa City.
Bemis, Frances Perl	Ph.	Estherville.
Benge, Nina	Ph.	Winterset.
Berry, Fred Samuel	Ph.	Sioux City.
Bond, Ethel May	Ph.	Sioux City.
Brackett, Merritt	Cl.	Iowa City.
Butler, Lindley M.	Ph.	Forest City.
Calkins, Guy Smith	Ph.	Iowa City.
Call, Roy Guyon	El. Eng.	Iowa City.
Carder, Helen L.	Ph.	Iowa City.
Carter, Leila Belle	Ph.	Iowa City.
Casady, Thomas	Cl.	Des Moines.
Clapp, Albert Carpenter	Sc.	Shelby.
Clark, Maude Geneva	Ph.	McGregor.
Clearman, Rollen Ives	Ph.	Iowa City.
Clegg, Samuel Harvey	Cl.	Ainsworth.
Coast, William Oscar	Sc.	Iowa City.
Coy, Charles L.	Ph.	Odebolt.
Crowell, Charles R.	Ph.	Fremont, Neb.
Currier, Albert Moore	Cl.	Iowa City.
Dayton, Meilie Leona	Ph.	Waukon.
Dow, Blanche	Ph.	Iowa City.
Downing, Harold B.	Ph.	Wellman.
DuBois, Walter Lynn	Sc.	Rockwell City.
Eberhart, Frank Vaughan	Sc.	Newton.
Eby, Robert	Ph.	Adair.

COLLEGIATE ENROLLMENT.

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NAME.	COURSE.	RESIDENCE.
Eller, Chester J.	Ph.	Pekin.
Emry, Fred Grant	Ph.	Brighton.
Espeset, James Howard	Ph.	Estherville.
Filer, Paul S.	Cl.	Parkersburg.
Fitz, Joseph Hamilton	Sc.	Panora.
Fitz, Mary	Cl.	Panora.
Frazier, Keith	Ph.	Nevada.
Funson, Harry Shugart	Ph.	Nevada.
Geyer, Ellen	Ph.	Cedar Rapids.
Griffith, Harry M.	Sc.	Mt. Ayr.
Hall, Ray Edwin	Sc.	Webster City.
Hanson, William P.	Ph.	Williamsburg.
Harris, Fred E.	Ph.	Woodward.
Hartley, Charlotte M.	Ph.	Iowa City.
Hayler, George Rex	El. Eng.	Fort Dodge.
Hoover, Alden Robbins	Sc.	Muscatine.
Hospers, John W.	Ph.	Orange City.
Houser, Paulina May	Ph.	Iowa City.
Hughes, Homer	Civ. Eng.	Iowa City.
Hull, Pearl	Sc.	Iowa City.
Huntington, Harry Garfield	Ph.	Onawa.
Johnson, H. C.	Ph.	Greene.
Joy, Adelaide F.	Cl.	Iowa City.
Kemp, John Levi	Sc.	Leon.
Kirby, James F.	Ph.	Williamsburg.
Koop, Charlotte Calkins	Ph.	McGregor.
Krause, Charles S.	Sc.	Iowa City.
Laartz, C. H.	Ph.	Atlantic.
Landers, John C.	Civ. Eng.	Webster City.
Lewis, Margarette Elsie	Ph.	Harlan.
Lillbridge, William Otis	Sc.	Akron.
Lodwick, Deca	Ph.	Eldon.
Lowman, Stella Elizabeth	Ph.	Iowa City.
Luhman, Fred Henry	Ph.	Postville.
Lynch, Robert J.	Sc.	Eagle Grove.
Macbride, Jean	Ph.	Iowa City.
McCabe, Richard W.	Ph.	Clarence.
McCarthy, Mark Joseph	Ph.	Struble.
McCauliff, Guy T.	Sc.	Aredale.
McCullough, Roy D.	Ph.	Wapello.
Macy, Clarence S.	Ph.	Adel.
Manhard, Edward	Sc.	Farmington.
Marsh, Richard Dana	Civ. Eng.	Marshalltown.

NAME.	COURSE.	RESIDENCE.
Martin, John Weston	Cl.	Fonda.
Martin, Thomas Edwin	Sc.	Emmetsburg.
Maudlin, Mina May	Cl.	Ladora.
Mead, Ray C.	Ph.	Wall Lake.
Mehaffy, Milton	Ph.	Morning Sun.
Middleton, Edward Duncan	Sc.	Davenport.
Mingus, Edna Mattison	Cl.	Iowa City.
Moler, M. Imo	Ph.	Iowa City.
Moore, Simon E.	Ph.	Panora.
Morgan, Walter J.	Ph.	Newton.
Morse, J. Warren	Cl.	Osage.
Morton, Helen Louise	Ph.	Iowa Falls.
Moulton, Helen Field	Cl.	Iowa City.
Mueller, Eugene F.	Ph.	Denison.
Mueller, Mary Theresa	Ph.	Iowa City.
Murphy, Charles	Ph.	Laurens.
Naftager, Jesse Blaine	Sc.	West Liberty.
Namur, Cecelia	Ph.	Iowa City.
Overholt, Mabel	Ph.	Iowa City.
Parsons, Ella Beckley	Ph.	Iowa City.
Pinkham, James E.	Ph.	Iowa City.
Plock, Henrietta D.	Ph.	Burlington.
Raguet, Conde LeRoy	Cl.	Washington.
Randall, Frank Hall	Cl.	Denison.
Remley, Alfred G.	Ph.	Anamosa.
Reno, Margaret	Ph.	Iowa City.
Reppert, Emma LeMaitre	Cl.	Agency.
Resser, Jesse	Ph.	Perry.
Rich, David W..	Cl.	Wayland.
Rowe, Frank N.	Sc.	Iowa City.
Rule, Edward A.	Sc.	Des Moines.
Seymour, William T.	Sc.	Iowa City.
Smith, Carrie Belle	Ph.	Red Oak.
Smith, Mabel Clare	Cl.	Harlan.
Spedel, Homer V.	Sc.	Iowa City.
Spedel, Ida Theresia	Sc.	Iowa City.
Storck, Arthur H.	Ph.	De Soto.
Storey, Leslie	Ph.	Iowa City.
Stover, Samuel K.	Ph.	Iowa City.
Sunier, Fannie Annette	Ph.	Iowa City.
Switzer, Grace E. E.	Ph.	Iowa City.
Warner, Joseph Sylvester	Ph.	Leon.
Whedon, A. D.	Ph.	Iowa City.

COLLEGIATE ENROLLMENT.

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NAME.	COURSE.	RESIDENCE.
Whited, Lydia	Ph.	Belmond.
Whitels, Alice R. F.	Ph.	Iowa City.
Williamson, Ralph Clinton	Ph.	Iowa City.
Wilson, Mamie Alwilda	Ph.	Randolph.
Wright, Hiram Newton	Ph.	Mt. Pleasant.

FRESHMAN CLASS.

NAME.	COURSE.	RESIDENCE.
Albert, Fred, Jr.	Ph.	Reinbeck.
Allen, Frank J.	Ph.	Scranton.
Anderson, Henry Alfred	Cl.	Cresco.
Anderson, William H.	Ph.	Swan Lake.
Armstrong, Jennie E.	Ph.	Canton, Minn.
Ashford, Charles F.	Ph.	Nevada.
Atwater, Margaret	Ph.	Iowa City.
Austin, Roy G.	Sc.	Mendon, Ill.
Austin, Roy G.	Sc.	Webster City.
Babcock, Francis Dwight, Jr.	Ph.	Ida Grove.
Bailey, Ella May	Ph.	Iowa City.
Ball, Henry Moffat,	Civ. Eng.	Iowa City.
Balle, Sophia Margaret	Ph.	Denison.
Barr, Mary Elizabeth	Ph.	Adel.
Barrett, Grace Adah	Ph.	Iowa City.
Baughn, Wilmot L., Jr.	Sc.	Harlan.
Bean, Arthur Neal	Ph.	Eagle Grove.
Beebe, Goldie May	Ph.	Mason City.
Bettannier, Bertha Nina	Ph.	Corning.
Birss, George A.	Ph.	Tipton.
Boehm, Walter M.	Sc.	Ft. Dodge.
Bradley, Clifford E.	Ph.	Rock Rapids.
Bradley, Frank	Ph.	Iowa City.
Bradley, Louise	Ph.	Iowa City.
Branson, Laura H., M. D.	Sc.	Iowa City.
Brown, Edwin Keech	Ph.	Solon.
Brown, Maud	Ph.	Marengo.
Bryson, Harold Louis	Ph.	Urbana.
Bulger, Joseph S.	Ph.	Des Moines.
Burmeister, August O.	Ph.	Adair.
Burt, William B.	Civ. Eng.	Hannawa Falls, N.Y.
Bywater, Joseph	Sc.	Garwin.
Carlson, Ernest Emil	Civ. Eng.	Battle Creek.
Carter, Edward Albert	Ph.	Muchakinock.

NAME.	COURSE.	RESIDENCE.
Cash, Emma May	Cl.	Webster City.
Cassady, Raymond Whiting	Ph.	Whiting.
Charlton, Max Rosecrans	Sc.	Clear Lake.
Choate, Rufus C.	Civ. Eng.	Iowa City.
Clearman, Albert Edward	Civ. Eng.	Iowa City.
Close, Anna S.	Ph.	Iowa City.
Cole, Alvernus Humphrey	Ph.	Grundy Center.
Condon, William F.	Cl.	Clare.
Corlett, Robert K.	Ph.	Iowa City.
Coyne, William L.	Ph.	Montrose.
Crane, Agnes Mae	Ph.	Mason City.
Cratty, Mabel Estelle	Ph.	Armstrong.
Crawford, Tillie J.	Cl.	Weilman.
Dakin, Amy Dorothy	Ph.	Mason City.
Dalton, Ula E.	Cl.	Jesup.
Dannatt, Ernest Garfield	Cl.	Camanche.
DeBusk, Will H.	Cl.	Panora.
DeKay, A. B.	Ph.	Ida Grove.
Doran, Thomas Cyrus	Sc.	West Burlington.
Doud, Robert Parsons	Ph.	Fort Dodge.
Douglass, Ruth	Ph.	Postville.
Dove, Wilma	Ph.	Iowa City.
Drewry, Ray Forest	Ph.	Sac City.
Dunkel, George K.	Civ. Eng.	Iowa City.
Edmondson, Charles Howard	Ph.	Milton.
Elliot, Ethel	Cl.	Marshalltown.
Felkner, Wilma	Ph.	Iowa City.
Fitch, Harry Holland	Cl.	Sac City.
Fitch, Theodore Thornbur	Civ. Eng.	Sac City.
Fitzgerald, Patsy	Ph.	Adel.
Fitzpatrick, Daniel H.	Ph.	Fort Dodge.
Fitzpatrick, Miles Joseph	Ph.	Fort Dodge.
Ford, D. Fae	Ph.	Manchester
Forncrook, Elva Marcella	Cl.	Iowa City.
Foster, Blanche Fairfax	Ph.	Iowa City.
Foster, Charles C.	Civ. Eng.	Iowa City.
Gay, Anna Mae	Cl.	Iowa City.
Gifford, Judge Herbert Sheldon	Ph.	Nevada.
Goodell, Frank LeRoy	Civ. Eng.	Tama.
Gordon, Mary Agnes	Ph.	Iowa City.
Green, C. Frank	Civ. Eng.	Sioux City.
Greene, Galen Edwin	Cl.	Greene.
Griffith, Mary Caroline	Ph.	Iowa Falls.

COLLEGIATE ENROLLMENT.

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NAME.	COURSE.	RESIDENCE.
Grillet, Ida Louise	Sc.	Sloux City.
Hadley, Herbert E.	Ph.	Badger.
Hanson, Henry Clarence	Sc.	Eagle Grove.
Hardman, Roy C.	Civ. Eng.	Tipton.
Harrison, Ward S.	Ph.	Terre Haute, Ind.
Hazard, Leland Arthur	Sc.	EastRandolph,N.Y.
Hegerich, George Harold	Civ. Eng.	Iowa City.
Henry, Ward Casady	Cl.	Des Moines.
Hess, Adam K.	Ph.	Council Bluffs.
Hess, Sadie Murray	Ph.	Iowa City.
Hess, Marguerite	Ph.	Iowa City.
Hill, George Edgar	Ph.	Burlington.
Hodge, Thomas Peter	Ph.	Eagle Grove.
Holmes, Hugh B.	Sc.	Iowa City.
Hossfeld, Eleanor	Ph.	Clermont.
Hotz, Frank William	Civ. Eng.	Iowa City.
Hotz, Verda	Ph.	Iowa City.
Howland, E. Addison	Civ. Eng.	Eagle Grove.
Hunter, George M.	Civ. Eng.	Iowa City.
Hutchison, George G.	Ph.	Lake City
Jarvis, Carolyn Belle	Ph.	Burlington.
Jasper, Lillie C.	Ph.	Newton.
Johnson, Eliza Love	Sc.	Iowa City.
Jones, Edward M.	Ph.	Iowa City.
Jones, Henrietta C.	Ph.	Albia.
Joynt, Martin John	Sc.	Emmetsburg.
Kalkofen, William H.	Ph.	Casey.
Kemmerer, Charles Tilghman, Jr.	Ph.	Eldridge.
Kemmerer, Lella	Ph.	Eldridge.
Kemmerer, Sara Dorcas	Ph.	Eldridge.
Kennedy, Nellie	Ph.	Iowa City.
Ketelsen, Phillip D.	Sc.	Dixon.
Kettlewell, W. Irwin	Civ. Eng.	Iowa City.
Kimball, Edwin Parker	Ph.	Onawa.
Kimball, Frank B.	Sc.	Iowa City.
Krebs, Robert D.	Ph.	Cedar Rapids.
Lauer, Ada	Ph.	Winfield.
Lauer, Arnold W.	Civ. Eng.	Winfield.
Letts, Leona R.	Ph.	Columbus Junct.
Lewis, Robert F.	Civ. Eng.	Iowa City.
Lewis, Thomas E.	Ph.	Williamsburg.
Lintleman, Fred R.	Ph.	Lake City.

NAME.	COURSE.	RESIDENCE.
Lockwood, A. H.	Sc.	Rock Rapids.
Lolzeaux, Celia	Ph.	Des Moines.
Lolzeaux, Jennie O.	Ph.	Des Moines.
Lorenz, Charlotte	Cl.	Burlington.
Louis, Fred	Ph.	Harlan.
Lewis, William John	Ph.	Dexter.
Luxford, George A.	Ph.	Defrance.
McClain, Henry Griffiths	Cl.	Iowa City.
McCoy, Edward Hugh	Ph.	Dumont.
McCrory, Samuel H.	Civ. Eng.	Ireton.
McFarland, Ralph	Sc.	Mendon, Ill.
McLaury, Emily Irene	Cl.	Webster City.
McMullin, Ernest Leroy	Ph.	Adel.
Magowan, Florence Nettie	Ph.	Tama.
Mason, Elma	Ph.	Fairfax, S. D.
Meade, Edward H.	Ph.	Rockwell City.
Meade, W. J.	Ph.	Oxford.
Meara, Anna Frances	Ph.	Iowa City.
Melton, Frank	Sc.	Villisca.
Merritt, Edith Whitney	Ph.	Iowa City.
Miller, Charles H.	Ph.	Waucoma.
Mitchell, Lebbeus Horatio	Ph.	Tallapoosa, Ga.
Moore, May E.	Ph.	Marshalltown.
Mulock, Edwin Hulbert	Sc.	Colfax.
Murphy, Bertilla	Sc.	Iowa City.
Murphy, Genevieve	Cl.	Iowa City.
Norman, Charles	Ph.	Van Meter.
Nugent, Francis	Civ. Eng.	Iowa City.
O'Malley, Linus Celestine	Ph.	Cresco.
Packard, Walter Steel	Ph.	Marshalltown.
Page, Charles P.	Civ. Eng.	Iowa City.
Pontius, Jessie	Sc.	Council Bluffs.
Pratt, H. M.	Sc.	Kalo.
Preston, Clara Carlton	Ph.	Elkader.
Randall, Van Quincy	Ph.	Kansas City, Mo
Reed, Roscoe Conkling	Ph.	Ida Grove.
Roach, Lena	Ph.	Rock Rapids.
Roberts, Jennie E.	Ph.	Iowa City.
Ressler, Rex Lambert	Sc.	Grundy Center.
Robertson, Alice M.	Cl.	Keswick.
Rosenblatt, Fritz	Sc.	Bayard.
Rule, James C.	Sc.	Des Moines.
Rundell, Mabel Anna	Ph.	Iowa City.

COLLEGIATE ENROLLMENT.

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NAME.	COURSE.	RESIDENCE.
Scales, Alfred John	Ph.	Ackley.
Schultz, Etta Ruth	Ph.	North Liberty.
Schulze, Laura M.	Sc.	Iowa City.
Scott, Alice Lillie	Sc.	Marion.
Seabury, Fred Horace	Civ. Eng.	Logan.
Seemann, Mamie J.	Sc.	Iowa City.
Seerley, Florence	Ph.	Burlington.
Shannahan, Edwin Joseph	Ph.	Holbrook.
Shepard, Edith	Ph.	Mason City.
Sherbon, Amos H.	Sc.	Iowa City.
Shorett, Judson Willard	Ph.	Earling.
Sieg, George L.	Ph.	Davenport.
Slavata, Maytilda M.	Sc.	Iowa City.
Smith, Harry Clark	Ph.	Harlan.
Smith, Maude Louise	Ph.	West Liberty.
Spangler, Harrison E.	Ph.	North Branch.
Sporleder, Mary Louise	Ph.	Iowa City.
Stein, Lollie A.	Ph.	Burlington.
Stryker, Clarence A.	Civ. Eng.	Creston.
Suhr, John C.	Sc.	West Side.
Sweney, Marshall C.	Civ. Eng.	Osage.
Swire, Ethelind	Ph.	Iowa City.
Swisher, Mabel Alice	Ph.	Iowa City.
Switzer, Katherine May	Cl.	Iowa City.
Thompson, John Wesley	Cl.	Wapello.
Trost, Fred William	Sc.	Ottumwa.
Tucker, George Chandler	Ph.	Webster City.
Tupper, Grace B.	Cl.	Osage.
Turner, Edward M.	Sc.	O'Neill, Neb.
Van Vleck, Alfred W.	Sc.	Toledo, O.
Varney, Cora C.	Ph.	West Branch.
Vaughn, John Thomas	Ph.	Fort Dodge.
Veblen, Agnes	Cl.	Iowa City.
Waldron, Alice Margretta	Ph.	Greenfield.
Walsh, John Graney	Sc.	Perry.
Watson, Harry	Cl.	Emmetsburg.
Watters, H. Bertram	Civ. Eng.	Iowa City.
Webster, Ruby		West Liberty.
Welch, Hershey Samuel	Civ. Eng.	Postville.
Wells, Leonard Alva		Reasoner.
White, Wilmer W.	Sc.	Aley, Ill.
Whitley, Gladys Call	Cl.	Webster City.
Williams, Earl J.	Sc.	Iowa City.

THE STATE UNIVERSITY OF IOWA.

NAME.	COURSE.	RESIDENCE.
Willis, Harry I.	Civ. Eng.	Iowa City.
Wilson, Leo A.	Sc.	Marengo.
Wright, Charles Oliver	Civ. Eng.	Tipton.
Young, Charles A.	Cl.	Panora.
Yule, Mildred	Sc.	Tipton.

SPECIAL STUDENTS.

NAME.	SUBJECT.	RESIDENCE.
Ainsworth, Alburn Stevens	Ethics.	Ft. Dodge.
Alden, George H.	Eng., Psychol.	Talmage, Kan.
Anderson, Oscar Elwood	Pol. Econ.	Avoca.
Bannister, Chase	Math., Physics.	Ottumwa.
Barker, James Archie	German.	Bloomfield.
Bartlett, H. G.	Statistics, Logic.	Orchard.
Bowen, Charles	Econom.	Cedar Falls.
Braman, Hammond	Surveying.	Boston, Mass.
Burton, Mrs. A. J.	Botany.	Atlantic.
Cameron, W. J.	English.	Des Moines.
Campbell, James Edmonds	Statistics.	Des Moines.
Caswell, C. Clyde	Zoology.	Marshalltown.
Chapman, H. R.	German.	Iowa City.
Cooper, Esther L.	Lit., Hist.	Winterset.
Cooper, Jay Clark	German.	Red Oak.
Cooper, Zada M.	German.	Quasqueton.
Corbett, Joseph R.	Drawing.	Lone Tree.
Crum, William Edwin, Jr.	History.	Bedford.
Daly, Maud Alice	German.	Mt. Zion.
Dennis, William	Hist., Psychol.	Onawa.
Dewey, Charles Almor	Iowa Govt.	Washington.
Edson, Willis Charles	Pol. Econ.	Blaine.
Elson, Lena	Eng., Hist.	Lineville.
Entwhistle, Mable Edith	Ger., Eng.	Rutland.
Erickson, Clara	Lit., Geol.	Stone City.
Feeley, G. A.	Pol. Econ.	Waterloo.
Ferguson, Harry Jay	Politics.	Clarence.
Gilmore, Jesse Melford	Logic.	Osage.
Gray, John Franklin	French.	Albia.
Healy, Patrick Henry	Greek.	Metz.
Hebel, David Andrew	Politics.	Burlington.
Helmbeck, Adolph James	Am. Lit.	Burlington.
Helmer, Charles C.	Finance.	Lisbon.
Hender, Alfred Baker	German.	Davenport.

SPECIAL STUDENTS.

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NAME.	SUBJECT.	RESIDENCE.
Hirsch, Edward Louis	Logic.	Burlington.
Holman, James Royal	English.	Rockwell.
Hourhan, James	Politics.	Mt. Pleasant.
Hubbard, Alice Elizabeth	German.	Ackley.
Hubers, O. G.	German.	Davenport.
Jenkins, Katherine B.	Math., Eng.	Anita.
Kelley, Horace Alcinous	Mathematics.	Burlington.
Kelley, Winfred B.	German.	Glenwood.
Klahn, Charles J.	German.	Denison.
Kramer, Nancy	Elocution.	Iowa City.
Kridelbaugh, J. W.	English.	Chariton.
Leuz, Nellie M.	Ped.	Iowa City.
Link, A. T.	German.	SugartreeRidge,O
Lynch, Grace Dorothy	Botany.	Iowa City.
Lynch, Wilford	English, Botany.	Iowa City.
McBurney, James W.	Hist., Econ.	Churdan.
McCormick, James Leroy	Finance.	Tipton.
Marshall, Lloyd Earl	German.	Davenport.
Matzen, P. E.	Econ., English.	Battle Creek.
Morgan, Della L.	German.	Iowa City.
Nies, Frank Knapp	Finance, Logic.	Marble Rock.
Otis, Edmund R.	Hist., Logic.	Monona.
Powell, Thomas Brundige	History.	Cedar Rapids.
Rankin, Wiley S.	Hist., Ethics.	Mason City.
Rule, Harold Vernett	Math., German.	Mason City.
Scully, George W.	English.	Ottumwa.
Sloan, Arthur Neely	German.	Sioux City.
Smith, D. Burt	Philosophy.	Darlington, O.
Smith, Lizzie	German.	Aurora.
Smith, Lucy Maud	German.	Mariposa, Cal.
Stanley, Clarence J.	Botany.	Whittier.
Warner, Alice L.	Eng., Hist.	Iowa City.
Warner, Loren Ashley	Hist., Logic.	Luana.
Washburn, Frank Augustus	Mathematics.	Mt. Pleasant.
Watson, Mary Newell	French.	Iowa City.
Wescott, L. A.	German.	Gladbrook.
Williams, R. H.	Hist., Phil.	Iowa City.
Wilson, Edward	Pol., Psychol.	Reinbeck.
Yaley, H. J.	English.	Burlington.

LAW DEPARTMENT.

SENIOR CLASS.

NAME.	DEGREE.	RESIDENCE.
Ainsworth, Alburn Stevens		Fort Dodge.
Anderson, Oscar Elwood.		Avoca.
Baer, Bernice Worth		Harlan.
	B. D., Southern Iowa Normal.	
Baker, Horace William		Wapello.
Barnes, Adonis D.		West Liberty.
Bander, Alpheus Germaine		Elgin.
	B. S., Northern Indiana Normal.	
Birdsall, Maurice Frederick		Clarion.
Blackburn, Newman Arthur		Cresco.
Blakely, Ira Thomas		Hope, N. D.
Boardman, Homer Norman		Nevada.
Borman, August Henry		Elkader.
Bowle, Archie G.		Iowa City.
Branford, Berent Marlinus		Randall.
Brant, Melbon Roscoe		Iowa City.
Brooke, Robert L.		West Liberty.
Burrows, James Sidney		Keokuk.
Burt, Alfred James		Emmetsburg.
	Ph. B., State University of Iowa.	
Byrnes, James		Waukon.
Caswell, Charles Clyde		Marshalltown.
Clark, Jesse Wilbur		Red Oak.
	M. S., Iowa Wesleyan University.	
Clark, Roy Perry		Marshalltown.
	B. S., Des Moines College.	

LAW ENROLLMENT.

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NAME.	DEGREE.	RESIDENCE.
Clearman, Lewis Charles Wade		Iowa City.
Clinite, Franklin Elmer		Independence.
Crans, Norman Wallace		Davenport.
Crary, Charles Judson		Lafayette, Ind.
Crary, Frederic Willis		Read.
Crookham, John A.		Oskaloosa.
Crossley, James Judson		Winterset.
	A. M., State University of Iowa; Ph. D., Yale.	
Downing, William Henry		Greene.
Elgin, Charles Henry		Centerville.
Fowler, John Charles		Keokuk.
Fralley, Joseph Robinson		Ft. Madison.
	Ph. B., State University of Iowa.	
Gray, Harry Blanchard		West Branch.
Hagander, Oscar William		Keokuk.
Hammond, Frank Earl		Hamburg.
Hampson, Frank Christopher		Osage.
Hanley, Charles Parmer		Muscatine.
Hartman, Harry Hale		Indianola.
Hebel, David Andrew		Burlington.
Hendrick, Burt		Waukon.
Heninger, Charles Clayburn		Martinsburg.
Hickman, James Harlan		Chariton.
Hirsch, Edward Louis		Burlington.
Holsteen, Frederick Sophus		Burlington.
	Ph. B., State University of Iowa.	
Horack, Hugo Claude		Iowa City.
	Ph. B., State University of Iowa.	
Hornibrook, Edward John		Cherokee.
Hourihan, James		Mount Pleasant.
Howard, John Raymond		Indianola.
Hubbard, Alice Elizabeth		Spencer.
Hughes, Clinton Boardman		Strawberry Point.
Hyde, Arthur Mastick		Princeton, Mo.
	B. A., University of Michigan.	
Jebens, Henry Hans		Davenport.
Johnson, John Edward		Iowa City.
Johnson, Karl Johan		Osage.
Kammerer, John		Wapello.
Luts, Walter Blackburn		Oskaloosa.
	B. A., Penn College.	
Macdonald, Hilda		Ashland, Wis.

NAME.	DEGREE.	RESIDENCE.
McCormick, John Bernard		Churdan.
	B. A., State University of Iowa.	
McCormick, William A.		Churdan.
McElroy, Walter Hamilton		Ottumwa.
McGee, John William Bolton		Iowa City.
McManus, Vincent Patrick		Adair.
Metcalf, Orin J.		Vinton.
Moon, Charles Hovey		Tipton.
Moorhouse, Robert Johnson		New Cumberland, W.Va.
	B. A., Wooster University.	
Murphy, Jeremiah Bartholomew		Marengo.
Okey, Frank Clifford		Corning.
	B. A., Princeton University.	
Otto, Ralph		Iowa City.
	B. A., State University of Iowa.	
Parry, Alexander Clem		Oskaloosa.
Peregrine, James Hanna		Corning.
	B. A., Parsons College.	
Reiley, Robert LeRoy		Wapello.
	B. A., Knox College.	
Reynolds, Hal Reede		Des Moines.
Rohde, Albert Ernst		Davenport.
Rohde, Carl Adolph		Davenport.
Rule, Arthur Lynnwood		Mason City.
Ruymann, Adolf		Davenport.
Sailor, George Durell		Iowa City.
	B. S., Cornell College.	
Sargent, Fred Wesley		Akron.
Scully, George William		Ottumwa.
Shaver, Bird Alexander		Red Oak.
Shepard, Hugh Hurst		Mason City.
	Ph. B., State University of Iowa.	
Snider, William Philip		Granger.
Stevens, Frederick Le Roy		Iowa City.
Suhr, John Chris		West Side.
Sullivan, John Lawrence		Clermont.
Swisher, Benjamin Franklin		Iowa City.
	Ph. B., State University of Iowa.	
Taylor, Herbert Edward		Iowa City.
	Ph. B., State University of Iowa.	
Teter, Lorenzo Dow		Knoxville.
Thomas, Benjamin Franklin		Traer.
	Ph. B., State University of Iowa.	

LAW ENROLLMENT.

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NAME.	DEGREE.	RESIDENCE.
Thompson, John McCandless		Marion.
	B. S., Coe College.	
True, George Clifford		Oskaloosa.
Walsh, Eugene John		Clinton.
Wessels, Arthur Lewis		Clinton.
	B. S., Cornell (N. Y.)	
Wessels, Alden Van Epps		Clinton.
Wheeler, Hamilton Harry		Kankakee, Ill.
Wheelock, Theodore Morris		Moline, Ill.
Whitmer, Albert Roy		Wilton Junction.
Wilcox, John Clinton		Montour.
Williams, Fred Almor		Neola.
	Ph. B., State University of Iowa.	
Wilson, William Bruce		Moulton.
Witt, Fred Henry		Ottawa, Ill.
Wright, Herbert Richard		Marshalltown

JUNIOR CLASS.

NAME.	RESIDENCE.
Abernethy, Herbert Alonzo	Osage.
	B. A., University of Chicago.
Allen, Robert Emmet	Independence.
Baker, Frank Milton	Emmetsburg.
Ballou, Benning Edward	Larrabee.
Balluff, Walter Martin	Davenport.
Banschbach, Omar Lot	Princeton, Ill.
Barker, Arthur James	Cresco.
	Ph. B., State University of Iowa.
Bartlett, Herbert Gallup	Orchard.
Becker, Joseph Stiel	Bellevue.
Beckman, Stephen Joseph	Burlington.
Bender, David Wilson	Oakland.
Berry, Edmund Charles	Livermore.
Berry, Frederick Samuel	Sioux City.
Blanchard, Emir E.	Hampton.
	Ph. B., Farmington College.
Bossert, Burt Ellis	Jefferson.
Bowen, Charley Edgar	Cedar Falls.
Bradley, Charles Clark	Council Bluffs.
	B. A., State University of Iowa.
Breen, James	Cumming.
Bridenstine, Burton Vance	North Liberty.

NAME.	DEGREE.	RESIDENCE.
Brown, Arnold Elmer		Osage.
Brown, Roy Chase		Sigourney.
Burrus, James H.		Winterset.
Burton, Albert Johnson		Atlantic.
Campbell, James Edmonds		Des Moines.
Clark, Fred Joseph		Mason City.
Cole, Arthur C.		Waterloo.
Conaty, William Lawrence		Traer.
Cotton, Richard Lee		Davenport.
	Ph. B., Bentonville College.	
Coy, Charles Lawrence		Odebolt.
Dahms, Edward John		Davenport.
	NAME.	RESIDENCE.
Darrow, John Donald		Columbus Junction.
Daum, Philip Hugh		Davenport.
Davis, Arthur William		Fonda.
	B. S., Upper Iowa University.	
Davis, Frank		Mt. Vernon.
Dayton, Charles Houghton		Iowa City.
	B. S., State University of Iowa.	
Dennis, William		Onawa.
Dewey, Charles Almon		Washington.
Downing, Harold Bliss		Wellman.
Eby, Moray Leon		Adair.
	B. S., State University of Iowa.	
Edson, Willis Charles		Schaller.
	B. S., Iowa State College.	
Egan, George William		California.
Elliott, Jay Edward		Rock Island, Ill.
Engle, Bert Jacob		Newton.
Feely, Guy Anthony		Waterloo.
Ferguson, Harry Jay		Clarence.
	B. S., Cornell.	
Ferson, Merton LeRoy		Frendale.
Fletcher, George H.		Cedar Rapids.
Flynn, James Edward		Minburn.
Foy, Charles H.		Tipton.
Frank, Walter C.		Red Oak.
Fry, Henry Edmond		Boone.
Genung, Clyde Thompson		Hastings.
Gilmore, Jesse Melford		Osage.
Gleason, Fred Brockway		Davenport.

LAW ENROLLMENT.

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NAME.	DEGREE.	RESIDENCE.
Glenn, Jacob Frank		Denison.
Grant, Franklin Ferdinand		Ida Grove.
Hall, Howard Morgan		Harlan.
Hamilton, Margaret Irving		New Haven, Conn.
Harvey, James Francis		Leon.
Hayward, Roy Stanton		Davenport.
	Ph. B., Cornell.	
Healy, Patrick Henry		Metz.
Helmbeck, Adolph James		Burlington.
Helmer, Charles C.		Lisbon.
Henderson, Frank Perrin		Indianola.
	Ph. B., Simpson.	
Henderson, Lewis Willford		Sibley.
Hildebrand, John Henry		Waterloo.
Hinchon, William David		Algona.
Hofman, William Jacob		Keystone.
Holman, James Royal		Rockwell.
Honeywell, Henry Jesse		Williamstown.
	B. S., Upper Iowa University.	
Hospers, John W.		Orange City.
Humphrey, Charles William		Winterset.
	Ph. B., State University of Iowa.	
Jackson, Ernest Andrew		Des Moines.
Johnson, David Nicholas		Iowa City.
Kaiser, Julius H.		National.
Kelley, Winfred Bishop		Lamoni.
	A. B., Graceland College.	
Kindall, Joseph William		Onawa.
Kingland, Thomas Andrew		Forest City.
Klahn, Charles		Denison.
Klincker, Peter John		Denison.
Kridelbaugh, Joe Wilford		Chariton.
Kugler, Arthur Alexander		Stacyville.
Laartz, Christopher H.		Atlantic.
	B. Di., Highland Park.	
Lee, Leslie Parvin		Iowa City.
	Ph. B., State University of Iowa.	
Lewis, Thomas Edward		Williamsburg.
Lovell, Guye E.		Garner.
McBurney, James Wayland		Churdan.
McCarthy, Mark Joseph		Struble.
McCormick, James LeRoy		Tipton.
McDonald, William Joseph		Vinton.

NAME.	DEGREE.	RESIDENCE.
McFarland, Fred O.	B. S., Knox College.	Mendon, Ill.
McKee, William Shakespeare		Conesville.
Manatt, Guy Sterling		Grinnell.
Marshall, Lloyd Earl		Davenport.
Mason, Eugene Irving		Carnforth.
Mason, Ralph Taylor		Albia.
Miller, John William, Jr.		Manning.
Mitchell, Ernest Roy		Ottumwa.
Moore, William Franklin		Dale.
Morse, J. Warren		Osage.
Mosnat, H. Roy	Ph. B., State University of Iowa.	Belle Plaine.
Moulton, Mark Mills		Maquoketa.
Murphy, Edward Andrews		Vinton.
Murtagh, James Cyrus		Shell Rock.
Nelson, George William		Davenport.
Nelson, John Silford	Ph. B., State University of Iowa.	Madrid.
Niccolls, George Howard		Morning Sun.
Nies, Frank Knapp		Marble Rock.
Noland, Harry Boardman		Cedar Falls.
Ogden, Raymond Davis		Williamsburg.
Otis, Edmund Rufus		Monona.
Owen, Lenton Warren		Spirit Lake.
Petersen, Walter Herman		Davenport.
Petrovitsky, Charles George		Cedar Rapids.
Phelan, Daniel Edward		Bristol.
Plato, Florence Mygatt		Iowa City.
Powell, Thomas Brundige	B. A., Denison University.	Cedar Rapids.
Preston, Fred Alexis		Grinnell.
Rankin, Wiley Strange		Mason City.
Redden, Will Lester		Danbury.
Regan, John Peter		Waukon.
Remley, James Edward		Anamosa.
Robish, Willis Herbert		Sumner.
Roebuck, Edith May	B. S., Upper Iowa University.	Iowa City.
Roedell, Robert Percy		Dubuque.
Rue, Lars O.		Ridgeway.
Saunders, Herbert Clifford		Manilla.
Schoonover, George L.		Anamosa.

LAW ENROLLMENT.

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NAME.	DEGREE.	RESIDENCE.
Scott, Jesse Freer		Eagle Grove.
Simonton, Thomas Milton		Sharon Center.
Slead, Hattie Tuller		Council Bluffs.
Smith, Arthur DeWitt		De Soto.
Smith, Frank Charles		New Hampton.
Soesbe, Clarence William		Greene.
Springer, William J.		Decatur City.
Stevenson, John Oglivie Jr.		Waterloo
	B. A., Tabor College.	
Stover, George Elmer		Iowa City.
	Ph. B., State University of Iowa.	
Stratford, Arthur Avon		Odebolt.
	Ph. B., Coe College.	
Struble, Guy Treat		Le Mars
Sweet, Earl Chapin		Delphos, Kan.
	B. A., Cornell.	
Tamislea, Robert Shannon Franklin		Waverly.
Tracy, Hayden Kenney		Cedar Rapids.
Turnell, Charles Allen		Kankakee, Ill.
Vaughan, Philip Timothy		Ft. Dodge.
Warner, Joe Sylvester		Leon.
Warner, Loren Ashley		Luana.
Weaver, Walter Le Roy		Iowa Falls.
Wells, Frank		Miles.
Wells, Leonard Alva		Reasnor.
Wilds, Alexander Gordon		Anamosa.
Williams, La Mont Abner		Shenandoah.
Wilson, Edward		Reinbeck.
Wilson, George McCulloch		Mt. Vernon.
	B. A., Cornell.	
Wissler, Edwin Arthur		Atlantic.
Woodbridge, Chandler		Central City.
Yaley, Horace J.		Burlington

MEDICAL DEPARTMENT.

SENIOR CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Augustine, Grant	Agency.	J. L. Augustine.
Bachman, Morris Piper	Waterloo.	Faculty.
Baker, James Archie, B. D.	Bloomfield.	C. C. Heady.
Bauer, William John	Marengo.	E. N. Brown.
Binford, William Sherwood	Dixon.	Faculty.
Burge, Albertus Joseph, M. S.	Iowa City.	Faculty.
Copeland, John Albert	Iowa City.	J. P. Mullin.
Corsaut, James Calvin	Allison.	A. J. Hobson.
Deters, William August	Eltzen, Minn.	Faculty.
Gray, Howard Devir	Newton.	P. Engle.
Hohenschuh, Frank Adam	Iowa City.	L. W. Littig.
Hollenbeck, Hubert Lewis	Anamosa.	L. J. Adair.
Mels, Edward William	Dyersville.	W. L. Bierring.
Neff, Mary Lawson, A. B.	West Liberty.	Faculty.
Reiter, Alfred E.	Burlington.	H. F. Steinle.
Sloan, Arthur Neely	Sioux City.	R. E. Conniff.
Stuart, Percy Ernest	Kellogg.	A. W. Adair.
Weir, Edward C.	Cumberland.	A. Weaver.
York, Nathan Albert	Iowa City.	J. C. Shrader.

JUNIOR CLASS.

NAME	RESIDENCE	PRECEPTOR
Beach, Lena Alice	Carroll.	A. L. Wright.
Beach, Melville Augustus	Carroll.	A. L. Wright.
Belsheim, Andrew Gilbert	Leland.	G. G. Belsheim.
Blackmore, Ralph Davis, B. S.	Iowa City.	E. L. Blackmore.
Bullock, William Elmer	Shelby.	G. H. Cassidy.
Cantonwine, Eutellis Augustus,	De Smet, S. D.	Faculty.
Cantwell, John Dalzell	Davenport.	Faculty.
Chapman, Horace Ray	Iowa City.	H. M. McKinsie.
Cretsmeyer, Charles H.	Waverly.	W. A. Rohlf.
Daly, Maud	Mt. Zion.	Faculty.
DeLespinasse, Adolph F. Henry	Orange City.	G. A. F. DeLespinasse.
Dotson, Eli E. Jr.	Mechanicsville.	J. K. Milbourne.
Fitzpatrick, Dennis Francis	Iowa City.	Jas. Murphy.
Frank, Carl Schurtz	Iowa City.	J. P. Mullin.
Gifford, Andrew James	Miller, S. D.	W. H. Lane.
Harlan, Charles D.	What Cheer.	J. C. Williams.
Harold, Arthur William	Ackley.	L. Phelan.

MEDICAL ENROLLMENT.

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NAME	RESIDENCE	PRECEPTOR
Hender, Alfred Baker	Davenport.	W. D. Middleton.
Hobbs, Samuel Warren, Ph. B.	Storm Lake.	Faculty.
Jarvis, Fred Jackson	Rose Hill.	Faculty.
Kemmerer, Theodore Wilbert	Eldridge.	C. T. Kemmerer.
Krejsa, Oldrich	Cedar Rapids.	J. R. Jicinsky.
Logan, Fred Wallace	Spencer.	E. E. Munger.
Logan, Jay Augustus	Canton; Ill.	J. A. Logan.
Lowry, James Davis	Ft. Dodge.	R. Evans.
McCall, Harry Kenyon	Ft. Dodge.	Faculty.
Middleton, George McClelland	Davenport.	W. D. Middleton.
Morgan, Charles Henry	Iowa City.	J. P. Mullin.
Morton, Lewis Burrows	Iowa Falls.	W. M. Morton.
Peterson, August John	Kensett.	Faculty.
Pringle, Jesse A.	Bussey.	L. A. Rogers.
Puleston, Fred	Anamosa.	A. C. Hejninian.
Ramsay, Guy	North Liberty.	Jas. Murphy.
Ridenour, Joseph Elmer	Garrison.	Faculty.
Sailor, Edwin Allen	Lisbon.	J. B. Carder.
Smith, Lizzie	Aurora.	Faculty.
Speers, Will Frederick	Vinton.	C. C. Griffin.
Stanley, Clarence J., B. S.	Whittier.	J. S. Love.
Wescott, Leroy Anderson, M. D.	Gladbrook.	A. F. Walter.

SOPHOMORE CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Agnew, Fred F.	Independence.	I. Patterson.
Albert, Henry	Reinbeck.	J.L.&F.W.Powers
Anderson, Harry Nathanael	Scranton.	S. H. Arthur.
Baer, Thomas Horatio	Ottumwa.	Faculty.
Chase, Will Bronk, B. S.	Des Moines.	C. C. Shope.
Christensen, Christen Jensen	Garwin.	N. M. Whitehill.
Clark, Alice May	McGregor.	H. H. Clark.
Cobb, Henry Aaron	Ida Grove.	J. E. Conn.
Cooper, Jay Clark	Red Oak.	J. W. Sifton.
Cummings, William Cyrus	Lohrville.	L. F. Cummings.
Day, William Elton	Dumont,	H. E. Day.
Dean, Ray Herbert	Muscatine.	H. M. Dean.
Dingman, Marshall Edwin	Urbana.	Faculty.
Donohoe, Anthony Patrick, B. S.	Iowa City.	Jas. Murphy.
Eaton, Will Hammond	Iowa City.	Faculty.
Fairall, Herbert Snowden, Jr.	Iowa City.	Faculty.
Farnham, Alford Jay	Traer.	Faculty.
Freiligh, Clarence Neill, B. S.	Elkhorn, Wis.	Faculty.

NAME.	RESIDENCE.	PRECEPTOR.
Fisher, Evelyn Battelle, Ph. B.	Monroe.	Faculty.
Fiske, Edgar Ellsworth	Iowa City.	W. H. Lewis.
Ford, Harry Garfield	Adel.	W. J. Williams.
Free, Samuel Pratt	Rippey.	J. H. Shipley.
Fritschel, Gottfried Constantine	Waverly.	W. A. Rohlf.
Gillette, Omer Rand, Ph. B.	Col. Sp'gs, Col.	Faculty.
Graham, Dell Ewing	De Witt.	Faculty.
Gray, John Franklin	Albia.	S. T. Gray.
Greear, Clabe Baker	Five Oaks, Va.	Faculty.
Guldner, Ludwig Friedrich	Davenport.	J. P. Crawford.
Harkness, Gordon Follette	Iowa City.	L. W. Dean.
Heinen, William Clark	Iowa Falls.	J. W. Everhart.
Heller, William Henry	Marcus.	F. E. Loomis.
Helmey, Carl Theodore	Canton, S. D.	F. P. Smith and J. R. Naunested.
Henninger, Louis, Jr.	Eddyville.	Faculty.
Hibbs, Fred Valentine	Lake City.	Faculty.
Johnson, Charles Curtiss	Ames.	W. E. Harriman.
Jones, Henry R.	Lawler.	Faculty.
Leehey, Florence Patrick	Independence.	J. H. Murphy.
Little, Ernest Hartley	Minburn.	F. L. Rogers.
Lowrey, Claude	Centerville.	C. S. James.
Lundvick, Arthur Wesley	Harcourt.	Faculty.
McAllister, Fred J.	Laurens.	J. H. Hovenden.
McCauliff, Guy T.	Aredale.	J. C. Powers.
McIntyre, Arthur Cecil	Mendota, Ill.	J. C. Corbus.
Maresh, George	Iowa City.	Faculty.
Nervig, Isaac Eugene	Thor.	Faculty.
Overmass, Sam Edward	Alexander, S. D.	J. F. Roselle.
Patterson, William Madison	Farmer City, Ill.	Faculty.
Pheasant, Lun Ray	Osceola, Neb.	Faculty.
Phillips, Albin Blackmore	Creamery.	N. W. Phillips.
Reppert, Lyell	Muscatine.	E. K. Tyler.
Rogers, Earl Bertram, B. S.	Osage.	Faculty.
Scarborough, Bert Virgil	Grand Junction	Faculty.
Schaefer, Paul Henry	Burlington.	Faculty.
Schooley, Alfred Heaton	Winfield.	J. M. Gahringer.
Seashore, David Edward	Dayton.	Faculty.
Seashore, Gilbert, A. B.	Pilot Mound.	Faculty.
Sherbon, John Bayard	Iowa City.	F. P. Lierle.
Siegfriedt, John Caspar Fred	Davenport.	W. S. Allen.
Starbuck, Thomas Davidson	Davenport.	Faculty.
Starr, Charles Freeman	Emmetsburg.	Faculty.
Steelsmith, Daniel Clarence	Conrad.	Faculty.

MEDICAL ENROLLMENT.

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NAME	RESIDENCE	PRECEPTOR
Tamisea, James Hugh	MissouriValley	J. L. Tamisea.
Taylor, Charles Irwin	Indianola.	Faculty.
Taylor, John Lealand	Dover, Ill.	A. B. Brackett.
Thomas, Will Harper	Traer.	Faculty.
Tilden, William Clark	Ames.	W. E. Harriman.
Trail, Charles Jeptha	Fayette.	Faculty.
Vinson, Harry Warren	Ottumwa.	Faculty.
Walliker, Willbur Myron	Clinton.	Faculty.
Wells, James Harlan	Iowa City.	Faculty.
Werts, Charles Martel	Russell.	Faculty.
Wiedow, Henry	Iowa City.	Faculty.
Wiley, Jesse Bertram	Buck Grove.	Faculty.
Young, John Wray	Bloomfield.	J.W.&H.C.Young.

FRESHMAN CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Ainsworth, Adelaide Lorena	Ft. Dodge.	C. H. Churchill.
Allen, James Scott Hathaway	St. Louis, Mo.	Faculty.
Allen, Lloyd Raymond	Russell.	T. Allen.
Appel, Fred Lyon	Muscatine.	Faculty.
Beam, Hugh Atlee	Moline.	W.W.&W.O.Beam
Bice, Gerald Roy	Troy Mills.	Faculty.
Birney, Varallas Clenthias, Jr.	Greene.	V. C. Birney.
Bowen, Albert Sydney	Waukon.	D. H. Bowen.
Braden, Austin Lynn	Mediapolis.	Faculty.
Briggs, Frank William, B. S.	NewProvide'ce	Faculty.
Brown, Florence Emily, Ph. B.	Marengo.	Faculty.
Buckmaster, Raleigh Ankeny	Jesup.	Faculty.
Burns, Thomas John	Manchester.	Faculty.
Bushnell, William Francis	Cedar Rapids.	H. S. Raymer.
Busta, Charles Seaver	Manley.	Faculty.
Carle, Frank Clifford	Urbana.	Faculty.
Carlson, Frank Gilbert	Hampton.	H. Malerian and T. Hacker.
Cathcart, John Watson	Mason City.	W. J. Egloff.
Chamberlain, Ben H.	Wyoming.	J. W. Kirkpatrick
Coffee, Percy Elmo	Des Moines.	W. O. Coffee.
Conley, Montrose	Boone.	L. W. Littig.
Creswell, William L.	Reinbeck.	Faculty.
Crowley, Jay M.	Galva.	Faculty.
Downing, Leroy Morgan	Wellman.	Faculty.
Dulin, John Albert	Webster.	Faculty.
Fee, Lewis Walter, B. S.	Quimby.	Faculty.

NAME.	RESIDENCE.	PRECEPTOR.
Fenner, Ira LaMont	Belmont.	Faculty.
Ficke, Emil Otto	Davenport.	E. S. Bowman.
Frink, Raymond	Cushing.	Faculty.
Garrison, George Bowman	Quasqueton.	J. W. Sifton.
Goodenough, Walter Rue	Stuart.	J. H. Kersey.
Goodwin, Charles Lucien	Vinton.	C. C. Griffin.
Graham, Joseph Aloysius	Dubuque.	Faculty.
Grothaus, Tarana Johanna	Buffalo Center.	J. F. Russ.
Havens, Pearl Walter	Green Mo'tain	Faculty.
Hetzel, Clarence Charles	Avoca.	Faculty.
Hoffman, Coleman Lovejoy	LaMolle, Ill.	Faculty.
Hooker, Ira Sidney	Waverly.	Faculty.
Hoover, Charles Edwin	Peabody, Kas.	Faculty.
Huston, Samuel Wesley	Wyman.	Faculty.
Ingham, George Meek	Wilton.	A. R. Leith.
Jackson, John Edward	Marion.	Faculty.
Jeffers, George Newton	Hanover, Ill.	Faculty.
Jennings, James Erwin	Oskaloosa.	C. E. Todd.
Jones, Henry	Battle Creek.	C. E. Conn.
Jones, Walter William	Eddyville.	F. E. Vance.
King, Oren W.	Vinton.	Faculty.
Kratochvil, Harry Henry	Hampton.	A. J. Hobson and J. C. Powers.
Kuhl, August Bernard	Harlan.	Faculty.
Lambert, Charles Irwin, M. D.	Cedar Falls.	Faculty.
Lantz, Ezra Douglass, A. B.	Lancaster, Pa.	W. R. Whitels.
Luke, Charles Lester	Hampton.	A. J. Hobson.
Lyon, Paul Tiffy	Dexter.	A. J. Zook.
Lytle, Carl Caruth	Kelly.	Faculty.
McCall, Harry Ernest	Berkeley.	Faculty.
McClure, Ernest Corey	Ferry.	E. B. Beaudry and H. G. Parry.
McKean, Alex C.	Scotch Grove.	M. M. Loomis.
McKeeby, Byron H., D. D. S.	Winthrop.	Faculty.
Manson, Almon Augustus, M. D.	Merrill.	Faculty.
Martin, John Walter	Evans.	E. B. Beaudry and H. G. Parry.
Meehan, Joseph James	Denison.	Faculty.
Meyer, Henry Edward	Hampton.	J. C. Powers.
Meyers, Jacob Franklin	Lisbon.	Faculty.
Moon, Roy	Montrose.	E. C. Chapman.
Moore, Dudley A.	Urbana.	G. L. Wyckoff.
Mueller, Emil Frederick	Dyersville.	N. J. A. Mueller.

MEDICAL ENROLLMENT.

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NAME.	RESIDENCE.	PRECEPTOR.
Murchison, Kenneth	Griswold.	M. L. Turner.
Murphy, Thomas	Lawler.	Faculty.
Murphy, William Linett	Long Grove.	Faculty.
Nelson, Fred Lawrence	Leando.	H. Herriford.
Nelson, Henry Eugene	Decorah.	Faculty.
Newman, Fred McPherson	Clarksville.	Faculty.
Nims, Edward Albert	Boone.	Faculty.
Norris, Frank Ambrose	Rock Valley.	Faculty.
O'Connor, Maurice Joseph	Independence.	Faculty.
Oredson, Olef Andrew	St. James, Minn.	F. E. Fenchers.
Osborne, Robert Prettyman	Davenport.	Faculty.
Poch, Louis E.	Atlantic.	Faculty.
Porter, Roy Samuel	Gilchrist, Ill.	J. M. Wyland.
Quammen, Charles	Wallingford.	Faculty.
Randall, Andrew Leroy	Denison.	Faculty.
Redmond, John Patrick	Dysart.	Faculty.
Robinson, Reuben Artman	West Union.	S. E. Robinson.
Schoenjahn, Walter Leroy	West Side.	Faculty.
Seymour, Frank Kelly	Iowa City.	Faculty.
Shaffer, Carl John, M. D.	Centerville.	Faculty.
Shiley, George Francis	Missouri Valley	Faculty.
Sullivan, John Bernard, A. B.	Anaconda, Mont.	Faculty.
Smead, Leslie Levant	Newton.	C. C. Smead.
Sparks, Frank Rufus	Iowa City.	Faculty.
Sutton, Hattie Davis	Rockport, Mo.	Faculty.
Todd, Lou Andree	Springdale.	Faculty.
Troth, Loyson Gates	Bijou Hills, S.D.	E. C. Clapp.
Viers, John Wesley	Burlington.	C. Stutsman.
Wagner, William Christian	Vinton.	G. A. Wagner.
Washburn, Frank Augustus, A. B.	Mt. Pleasant.	Faculty.
Welsh, Fred Edwin	Boone.	G. D. Rowe.
Welsh, Thomas William	Iowa City.	Jas. Murphy.
Whitaker, Ellis John	Davenport.	Faculty.
Wolfe, Channing Elmer	Panora.	Faculty.
Young, James Myron	Center Junction	J. W. Richards.

HOMŒOPATHIC MEDICAL DEPARTMENT.

SENIOR CLASS.

NAME.	RESIDENCE.
Carmichael, Eugene	Iowa.
Coddington, James K.	Illinois.
Ellers, Paul G.	Iowa.
Hamilton, Wm. A.	Iowa.
Hill, Alice S.	Iowa.
Hoskins, John B.	Iowa.
Howe, Marion A.	Iowa.
McGarvey, Anna M.	Iowa.
Rorabaugh, William E.	Iowa.
Young, Glyndon A.	Iowa.

All of whom received the Degree of Doctor of Medicine, at the Commencement, March 27th, 1900.

JUNIOR CLASS.

NAME.	RESIDENCE.
Anderson, George W.	Iowa.
Babcock, Elmer	Iowa.
Kauffman, Edward C.	Iowa.
Kemp, E. D.	Iowa.
Launder, Frank T.	Iowa.
Little, Lowell	Nebraska.
Martin, Hobart E.	Iowa.
Musgrave, George J.	Iowa.
Parsons, Percy L.	Iowa.
Pond, Issi Otto	Iowa.
Richards, Frank O.	Iowa.
Sarchett, George A.	Iowa.
Snitkay, Chas. J.	Iowa.
Stoakes, Wm. H.	Iowa.
Swallum, James A.	Iowa.
Wenzelick, George J.	Iowa.
Wilkinson, Landy A.	Iowa.
Winters, Louis E.	Iowa.

SOPHOMORE CLASS.

NAME.	RESIDENCE.
Alden, Geo. W.	Iowa.
Bower, Curtis E.	Iowa.
Carolus, Walter J.	Illinois.
Clapp, Archie B.	Iowa.
Cogswell, Chas. H., Jr.	Iowa.
Cooper, Wm. A.	Iowa.
Crew, Arthur E.	Iowa.
Fullmer, Burt E.	Iowa.
Jackson, James M.	Iowa.
Jerrel, Alfred B.	Iowa.
Lathrop, William C.	Iowa.
McDowell, Gilbert T.	So. Dakota.
Page, Clarence V.	Iowa.
Shurtz, Onelda	Iowa.
Smith, A. H.	Iowa.
White, Cheney L.	Iowa.

FRESHMAN CLASS.

NAME.	RESIDENCE.
Beatle, Charles A.	Iowa.
Bywater, Edward M.	Iowa.
Chase, Ransom A.	Iowa.
Cross, Frank W.	Iowa.
Edmunds, Clara	Iowa.
Evans, Clayton R.	Iowa.
Graves, Rex V.	Iowa.
Hanson, Edward B.	Iowa.
Hollis, Edward L.	Iowa.
Holman, Henry D.	Iowa.
Howland, Charles	Iowa.
Huff, Ellsworth A.	Iowa.
Jackson, Anna	Iowa.
Jacobsen, Robert A. (partial)	Iowa.
Keaster, Joseph B.	Iowa.
Kemp, Malcolm E.	Iowa.
Klinefelter, Edgar L.	Iowa.
McMillan, Edwin C.	Iowa.
Matteson, Henry G.	Iowa.
Owen, W. Roy	Iowa.
Pratt, Grafton H.	Iowa.
Sandy, Benj. B.	Iowa.

NAME.	RESIDENCE.
Sellburg, Nicholas .	Iowa.
Stockman, James Wm.	Iowa.
Waltman, William Henry	Iowa.
Wild, Peter R.	Iowa.

NURSES SCHOOL.

NAME.	SENIOR.	RESIDENCE.
Blank, Mae Ellen		Walker.
Dunham, Elva Marion		Manchester.
Moore, Mary Phoebe		Mt. Vernon.
	JUNIOR.	
Conners, Virginia		West Liberty
Herrick, Helen G.		Mt. Vernon.
Nieder, Emma J.		Iowa City.
	PUPIL.	
Chantry, Lillian		Chariton.
Dean, Meda		West Branch.
Fullmer, Jessie N.		Marshalltown
Mether, Emmaline Marie		Waverly.
Richards, Sarah Maude		Iowa City.

DENTAL DEPARTMENT.

SENIOR CLASS.

NAME.	RESIDENCE.
Brown, Esther	Iowa.
Browning, Ernest W.	Iowa.
Devaney, W.	Iowa.
Dexter, C. J.	Iowa.
Eller, C. L.	Iowa.
Fairall, J. A.	Iowa.
Gibford, H. T.	Iowa.
Griffs, T. R.	Iowa.
Goodenough, G. D.	Iowa.
Hall, E. A.	Iowa.
Hasek, A. M.	Iowa.
Holson, Alliene M.	Iowa.
Holson, E. R.	Iowa.
Kenderdine, W. H.	Iowa.
Knowles, A. C.	Iowa.
Kelley, T. H.	Iowa.
Lockhart, Wm. I.	Iowa.
McCartney, O. E.	Iowa.
Mentzer, J. A.	Iowa.
Moore, R. B.	Iowa.
Overholt, F. E.	Iowa.
Oldaker, Leroy J.	Iowa.
Parsons, C. D.	Iowa.
Peek, E. S.	Iowa.
Shannon, R. B.	Illinois.
Swisher, A. R.	Iowa.
Will, R. T.	Iowa.
*Woolverton, Ella G.	Iowa.
Young, A. S.	Illinois.

JUNIOR CLASS.

NAME	RESIDENCE
Benson, G. C.	Iowa.
Birchard, T. L.	Iowa.
Cameron, W. J.	Iowa.
Cannom, W. L.	Iowa.

*Not in attendance.

NAME.	RESIDENCE.
Carpenter, L. D.	Iowa.
Chamberlain, L.	Illinois.
Davis, J. A.	Illinois.
Davis, J. D. C.	Iowa.
*De Lespinasse, A. F.	Iowa.
Dewey, J. B.	Iowa.
Faber, A. J.	Minnesota.
Fraser, M. O.	Illinois.
Gilbreath, F. M.	North Dakota.
Godlove, L. L.	Iowa.
Graybeal, W.	Illinois.
Hamll, M. P.	Iowa.
Hammer, W. W.	Iowa.
Hawes, D. R.	Iowa.
Hecht, R. H.	Iowa.
Houser, D. G.	Illinois.
Kier, G. P.	Iowa.
Lange, F.	Iowa.
Lundy, L. T.	Iowa.
Macfadden, C. C.	Minnesota.
Maxon, L. J.	Iowa.
McCoy, T. R.	Iowa.
Moore, C. A.	Iowa.
Morton, R. A.	Iowa.
Morrison, J. C.	Iowa.
Moss, S.	Iowa.
Naibert, W. F.	Iowa.
Pringle, G. A.	Iowa.
Reed, G.	Iowa.
Reidy, M. J.	Iowa.
Schrader, E. A.	Kansas.
Shane, C. N.	Iowa.
Tilton, C. T.	Iowa.
Tourtelott, L. J.	Iowa.
Wait, T.	Iowa.
Waters, F. H.	Iowa.

FRESHMAN CLASS.

NAME	RESIDENCE
Allen, Henrietta	Pennsylvania.
Bantan, Bertram M.	Iowa.
Beatty, Earl	Iowa.
Blodgett, Corydon L.	Iowa.
Carroll, Will D.	Iowa.

*Not in attendance.

DENTAL ENROLLMENT.

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Churchill, Guy R.	Iowa.
Cook, Harry D.	Iowa.
Cooling, Arthur B.	Iowa.
Corsant, Chas. K.	Iowa.
Cress, George	Iowa.
Daly, Eunice	Iowa.
*Daugherty, Lee J.	Iowa.
Detweiler, Carrie	Iowa.
Dunning, Walter L.	Iowa.
Davis, Dana Stone	Ohio.
Evers, Henry S.	Iowa.
Ferree, Guy A.	Iowa.
*Fischer, Chas. C.	Iowa.
Haffa, Frank A.	Iowa.
Haller, Wm. C.	Iowa.
*Harris, Cleo Stanley	Iowa.
Harris, Edgar P.	Iowa.
Hildebrand, Joseph A.	Iowa.
Hine, Walter G.	Iowa.
Householder, Frank L.	Iowa.
Hoxie, Chas. Guy	Iowa.
*Herbert, Vane E.	Iowa.
Jeffers, Wm. J.	Iowa.
Johnson, Archie D.	Iowa.
*Jones, Robert T.	South Dakota.
Kain, Will E.	Iowa.
*Kemp, Malcolm E.	Iowa.
*Lawyer, Emory Elmer	Iowa.
Lee, Arthur C.	Iowa.
Lewis, LeRoy W.	Iowa.
Lingo, Arthur M.	Iowa.
Matthesen, George A.	Iowa.
Meyer, Frank A.	Iowa.
Meyer, Chas. E.	Iowa.
Miner, Cora R.	Iowa.
Mueller, Henry C.	Iowa.
Munger, Frank E.	Iowa.
!Ogg, Ralph	Iowa.
Paulsen, Herman	Illinois.
Port, Chas. T.	Iowa.
Porter, James Tudor	Iowa.
Reichert, Chas. S.	Iowa.
Reedy, Edward	Nebraska.
Rhoades, Rex H.	Iowa.

* Not in attendance.

! Assistant's course.

Rittler, Elmer	Iowa.
Roth, Arthur J.	Iowa.
Rupp, Hugh	Iowa.
Sherer, Roy Eugene	Iowa.
Sherman, Wm. A.	Iowa.
Small, Bert A.	Iowa.
Spence, Everett Wm.	Iowa.
Stimmel, Edgar C.	Iowa.
Suthers, Wilfia A.	Iowa.
Thode, Guy Eugene	Iowa.
Van Oven, Adelbert	Iowa.
Volland, Roscoe H.	Iowa.
*Warner, Orlyn D.	Iowa.
Waud, Clarence C.	Iowa.
Weiland, Frank H.	South Dakota.
Witter, Louis A.	Iowa.
Wood, Samuel Austin	Iowa.
Yeoman, Mitchell B.	Iowa.
?Young, Richard	Iowa.

*Not in attendance
?Irregular.

DEPARTMENT OF PHARMACY.

SENIOR CLASS.

NAME.	RESIDENCE.
Baker, Melvin Franklin	Eldora, Iowa.
Bender, Arthur Clarence	Shenandoah.
Benesh, Emil	Vining.
Brady, Charles Francis	Cedar Falls.
Carroll, Clara Moore	Marcus, Wash.
Goodnow, Harvey Adelbert	West Union.
Grover, Robert Oswald	Central City.
Hart, Bert	Danbury.
Heston, Harry B.	Beaver City, Neb.
Kane, William P.	Deerfield.
Koltermann, Gustav Hermann	Charles City.
Merckel, Carl Donald	Charles City.
Miller, Frederick William	Amana.
Opfer, John C.	Waukon.
Severin, Alfred Louis	Cedar Falls.
Stansbury, Howard Erskine	Spencer.
Stump, Wilbur Henry	Toledo.
Wise, Harley Louis	Milford.

JUNIOR CLASS.

Balaban, Rudolph	Fulton, Neb.
Berger, Arthur Americus	Toledo.
Boehm, Otto Louis	Ft. Dodge.
Broodeen, Luther LeRoy	Essex.
Brush, Edward Lewis	Ashland, Neb.
Childs, Geo. S.	Council Bluffs.
Coye, Charles Horton	Carson.
Deur, William Eugene	Missouri Valley.
Gates, Roy Homer	Marble Rock.
Harvey, James Raymond	Pleasant Plain.

NAME.	RESIDENCE.
Holm, Ezekiel Steinbilder	Marengo.
Holt, Stephen Albion	Creighton, Neb.
Hormel, Eckert Emil	Iowa City.
Horton, Grant	Brighton.
Joy, Nellie F.	Grinnell.
Keefe, Abe Jenning	Elma,
Loucks, Grace	Danbury.
Lumsden, William Thomas	Iowa City.
Mack, Chas. Leonard	Omaha, Neb.
McDonald, Dillon Joseph	Jackson, Neb.
McMurray, Chas. Azariah	Andrew.
Morgan, John Walter	Iowa City.
Morgan, Robert Paul	Council Bluffs.
Murray, Wilbur L.	Syracuse, Neb.
Pringey, Bruce Frank	Cumberland.
Roche, James Henry	Elma.
Schalekamp, Henry James	Orange City.
Senn, John William Henry	Osmond, Neb.
Smith, Arthur Earnest	Marshalltown.
Smith, Roy Charles	Eagle Grove.
Stayskal, Joseph	Vining.
Thomas, Ruth Jane	Iowa City.
Ulch, James J.	Elberon.
Wikoff, Don	Hamburg.
Workman, Ellsworth	Howard, Ohio.

SUMMARY.

COLLEGIATE DEPARTMENT:

Graduate Students.....	86
Seniors	118
Juniors	121
Sophomores	124
Freshmen	211
Special	73—733

LAW DEPARTMENT:

Seniors	102
Juniors	156—258

MEDICAL DEPARTMENT:

Seniors	19
Juniors	39
Sophomores	74
Freshmen	101
Special	8—241

HOMOEOPATHIC MEDICAL DEPARTMENT:

Seniors	10
Juniors	18
Sophomores	16
Freshmen	26
Nurses	10— 80

DENTAL DEPARTMENT:

Seniors	29
Juniors	40
Freshmen	68—137

PHARMACY DEPARTMENT:

Seniors	18
Juniors	35— 53

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Deduct for names counted twice.....	64
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UNIVERSITY ALUMNI ASSOCIATION.

PRESIDENT:

Howard M. Remley, C. '69, L. '72.....Anamosa

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Leona A. Call, C. '80.....Iowa City

Sallie Ham Coyle, C. '81.....Humboldt

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TREASURER:

Charles S. Magowan, C. '84.....Iowa City

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Harry S. Richards, C. '92.....Iowa City

Mary Lytle Lodge, N. '67.....Iowa City

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A. G. Smith, C. '91.....Iowa City

W. H. Bremer, C. '91, L. '95.....Des Moines

RAILROAD SECRETARY:

S. K. Stevenson, C. '93.....Iowa City

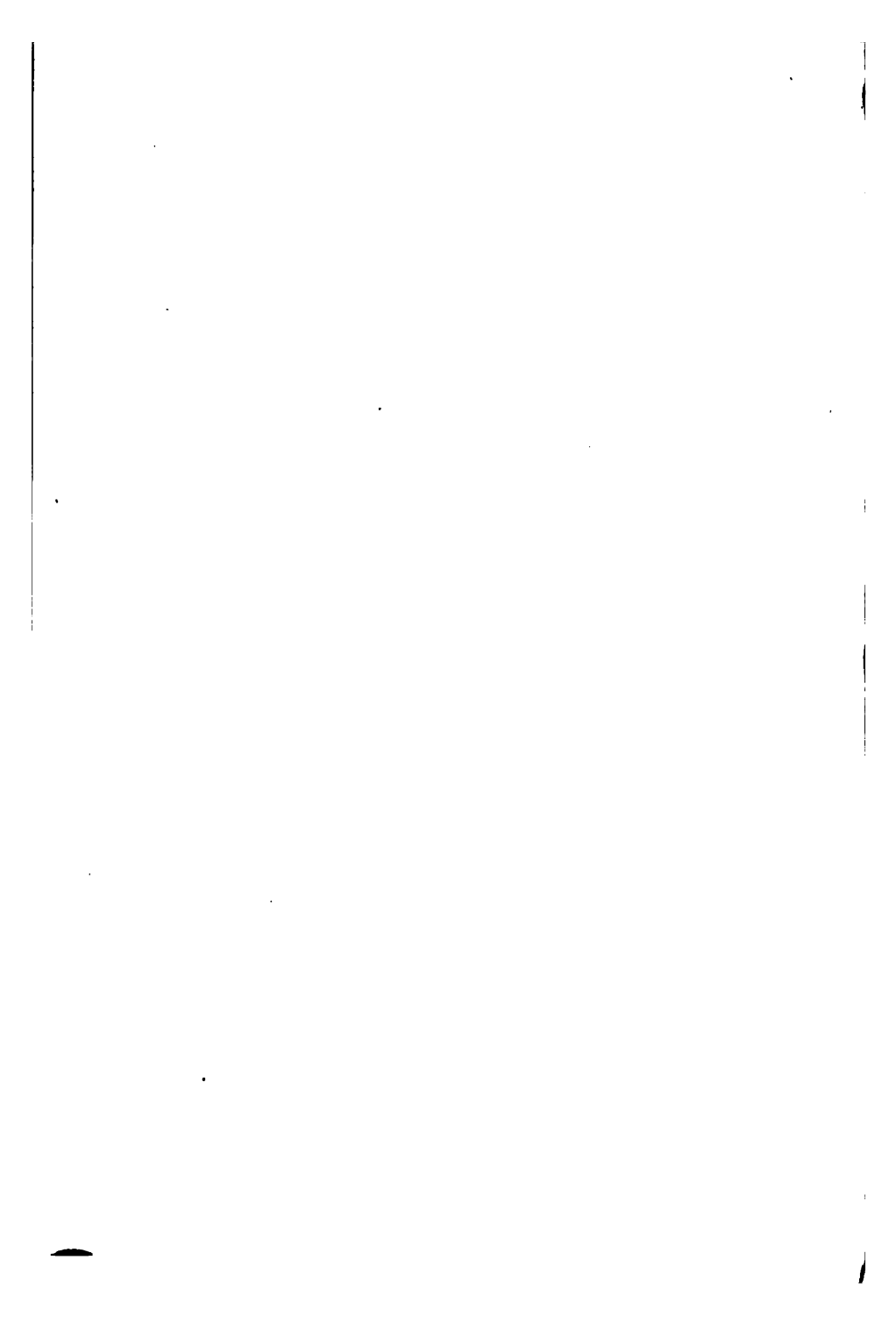
All graduates of the University are invited to membership. The annual meeting occurs at 2 P. M. on Tuesday preceding Commencement and the banquet at 6 P. M. of the same day.

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BULLETIN OF THE STATE UNIVERSITY OF IOWA

NEW SERIES, No. 80

JUNE, 1901

CALENDAR

OF THE

State University of Iowa

1900--1901



PUBLISHED BY THE UNIVERSITY

IOWA CITY, IOWA

1901

THE UNIVERSITY BULLETINS PUBLISHED BY THE UNIVERSITY ARE ISSUED EVERY SIX WEEKS, DURING THE ACADEMIC YEAR, AT LEAST SIX NUMBERS EVERY CALENDAR YEAR. ENTERED AT THE POST OFFICE IN IOWA CITY AS SECOND CLASS MAIL MATTER.

By authority of the Board of Regents separate announcements of the following colleges and schools will be sent gratuitously, postage paid, to all persons who apply for them: Graduate College; College of Liberal Arts; of Law; of Medicine; of Homeopathic Medicine; of Dentistry; of Pharmacy; Iowa School of Political and Social Science; the Summer Session. In calling for announcements please state the college or school concerning which you desire information.

Address

THE PRESIDENT,
The State University of Iowa,
Iowa City, Iowa

THE
STATE UNIVERSITY OF IOWA

CALENDAR

1900-1901



PUBLISHED BY THE UNIVERSITY
IOWA CITY, IOWA
1901

CALENDAR FOR 1901-1902

1901

1902

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THE UNIVERSITY CALENDAR

1901-1902

1901

- June 7, Friday Anniversary exercises of the literary societies, 8 P. M.
- June 9, Sunday Baccalaureate address, 4 P. M.
- June 10, Monday Class Day exercises.
College of Dentistry, Commencement, 10 A. M.
- June 11, Tuesday Battalion drill and dress parade, 4 P. M.
Alumni Day.
Phi Beta Kappa oration, 10 A. M.
Alumni meeting, 2 P. M.
Alumni dinner, 6 P. M.
- June 12, Wednesday College of Law, Commencement, 10 A. M.
- June 13, Thursday College of Liberal Arts, Commencement, 10 A. M.
- June 14, 15, Friday, Registration for Summer session.
Saturday
- June 17, Monday Summer session begins.
- July 25, 26, Thursday, Examinations by the State Board of
Friday Educational Examiners.
- July 27, Saturday Summer session ends.

SUMMER VACATION

- Sept. 16, Monday Examinations for admission and registration, 2 P. M.
- Sept. 19, Thursday Instruction begins in all Colleges, 8 A. M.
University Convocation, address by the President, 4 P. M.
- Nov. 20, Wednesday First term ends, Colleges of Medicine
Homœopathic Medicine, Dentistry, and Pharmacy.
- Nov. 27, Wednesday Thanksgiving recess begins, 8 A. M.
- Dec. 2, Monday Work resumed in all Colleges, 8 A. M.
- Dec. 21, Saturday Holiday recess begins.

1902

Jan. 2, Thursday	Work resumed in all Colleges, 8 A. M. Winter term begins in the College of Liberal Arts and the College of Law.
Feb. 10, Monday	Second semester begins in the Colleges of Medicine, Homœopathic Medicine, Dentistry, and Pharmacy.
Feb. 22, Saturday	University Convocation.
March 27, Thursday	Winter term ends, College of Liberal Arts and College of Law.
April 1, Tuesday	Spring term begins, College of Liberal Arts and College of Law.
April 12, Friday	Third term ends, Colleges of Medicine, Homœopathic Medicine, Dentistry, and Pharmacy.
June 6, Friday	Anniversary of literary societies, 8 P. M.
June 8, Sunday	Baccalaureate address, 4 P. M.
June 9, Monday	Class Day exercises. Battalion drill and dress parade, Review by the Governor of Iowa, 4 P. M.
June 10, Tuesday	Alumni Day. Phi Beta Kappa oration, 10 A. M. Alumni meeting, 2 P. M. Alumni dinner, 6 P. M.
June 11, Wednesday	Addresses before the Colleges. President's reception, 4 P. M.
June 12, Thursday	Commencement, all Colleges, 10 A. M.
June 16, Monday	Summer session begins.
July 24, 25, Thursday, Friday	Examination by the State Board of Educational Examiners.
July 26, Saturday	Summer session ends.
Sept. 15, Monday	Examinations for admission.
Sept. 18, Thursday	University year begins in all the Colleges

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*RICHARD C. BARRETT,
Superintendent of Public Instruction*

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W. I. BABB,† }

*Died October 30, 1900.

†Appointed January 8, 1901.

‡Appointed in place of M. A. Higley, deceased.

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FLORENCE E. BROWN, B. PH., Superintendent of the University Hospital.

JAMES GRANT GILCHRIST, M. D., Director of the Homœopathic Hospital.

MARY A. RAFF, Superintendent of the Homœopathic Hospital.

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BERTHA GILCHRIST RIDGWAY, Librarian.

CHARLES CLEVELAND NUTTING, M. A., Curator of the Museum.

BOHUMIL SHIMEK, C. E., Curator of the Herbarium.

*Resigned Jan. 1, 1901.

PUBLIC LECTURES

1900.

Sept. 20, Convocation—President MacLean. "Ethics of college life."

Dec. 16, Y. M. C. A.—The Rev. E. M. Vittum, D. D. "Life and love."

1901.

Jan. 20, Convocation—President Charles Eldred Shelton, M. A., Simpson College. "Manhood."

Feb. 22, Convocation—Chancellor E. Benj. Andrews, LL. D., University of Nebraska. "Anti-Cassandra, or a rap at the croaker."

Feb. 22, Auspices of Sigma Xi—Professor J. Ernest Woodland, M. S. "Liquid air."

March 17, Vesper Service—The Rev. John B. Donaldson D. D., Davenport. "We have found the Messiah."

May 12, Vesper Service—The Rev. Frederick W. Hinitt, Ph. D., president of Parsons College.

Nov. to June—Professor Macbride. The slime moulds; The distribution of seeds; The flora of the sea; Our prairie flora; Microbes and their cultures; Colors of flowers and plants; Diatoms, polishing powders, infusorial earth; Plant fiction; Fungi—the toadstools and mushrooms; The native flora of the tropics; Wood—its nature, mode of development, and growth; Soils—their formation and relation to plants; Our native trees—the trees of forest and prairie; Forest distribution in Iowa with reference to topography and drainage; Our native trees—the conifers, pines, firs, spruces, etc.; Tree-planting in Iowa; Mt. Shasta—its fountains and forests; Liverworts and mosses; Parks and park possibilities in Iowa; Ferns and fern-like plants; Other parks in the United States; The fern flora, past and present; Botanic gardens in the United States; Our trees in winter; Botanic gardens in Europe—in Java; Economic plants of the tropics; Old World parks and forest scenes; Coffee—its cultivation and preparation for market; Cemeteries—their decoration; Cotton—its cultivation and uses; Flowers in their native haunts; Transplanting trees—grafting and pruning; Cultivated flowers

—flowers for purposes of decoration; Flowers and wind; Sand dunes and their flora; The flora of lake and stream; The flora of the desert; Local plant ecology; Forestry in Europe; Flowers and insects—form and position of flowers; Forestry in the United States; Flowers and insects—color, season of the year, nectar, etc.; American homes—their history and possibilities; Movements of plants; American streets—their decoration and the lack of it; Indian corn.

Jan. 8 to May 7—Professor Calvin. Rock weathering and erosion; The behavior of rivers in base-leveling and penetration; Glaciers—their origin, classification, distribution; Glaciers—their destructive and constructive work; Mountains—their structure and genesis; Mountain sculpturing and mountain scenery; Volcanoes and earthquakes; The scenery and topography of the driftless area in Iowa; The topography of the drift-covered portions of Iowa; The Sioux quartzite in Iowa, South Dakota, and Minnesota; Cambrian and Ordovician formations of Iowa; Silurian and Devonian formations of Iowa; The Carboniferous; Mesozoic and early Cenozoic formations along the Upper Missouri; Paleozoic and pre-Paleozoic faunas; Mesozoic faunas; Cenozoic faunas; The Glacial Epoch in Iowa.

Jan. 31 to March 7—Professor Fairbanks. Excavations in Greece; The beginnings of sculpture in Greece; Sculpture as an aid to architecture; Pheidias and Polykleitos; The Age of Praxiteles; Greek portraits and grave monuments; The Hellenistic age; The cities of Homer; Homeric civilization.

ORGANIZATION OF THE UNIVERSITY

The State University of Iowa is an integral part of the public school system of the state. As required by law, the work of the University is based upon the preparation afforded by the duly accredited high schools of the state, whose graduates are admitted to the undergraduate and professional courses upon presentation of the proper certificates. A sense of this vital connection with the public schools determines, in a large measure, the requirements for admission to the University, its spirit, and its courses of study.

The control of the University is intrusted to a Board of Regents, consisting of the Governor of the State and the Superintendent of Public Instruction *ex-officiis*, and of one member from each of the eleven congressional districts, elected by the General Assembly.

The University is administered through the following organizations:

THE COLLEGE OF LIBERAL ARTS, including the Summer Session;

THE COLLEGE OF LAW;

THE COLLEGE OF MEDICINE;

THE COLLEGE OF HOMŒOPATHIC MEDICINE;

THE COLLEGE OF DENTISTRY;

THE COLLEGE OF PHARMACY;

THE GRADUATE COLLEGE;

IOWA SCHOOL OF POLITICAL AND SOCIAL SCIENCE;
HOSPITALS.

THE MEMBERS OF THE FACULTIES AND OTHER OFFICERS

GEORGE EDWIN MACLEAN, B. A., 1871; M. A., 1874, Williams;
B. D., 1877, Yale; Ph. D., 1883, Leipzig; LL. D., 1895,
Williams.

President, 1899.* 603 College St. (Old Capitol)

AMOS NOYES CURRIER, B. A., 1856; M. A., 1859, Dartmouth;
LL. D., 1893, Des Moines.

Professor of Latin Language and Literature, and Dean of the College
of Liberal Arts, 1867. 32 Bloomington St. (7 Old Capitol)

PHILO JUDSON FARNSWORTH, B. A., 1854; M. A., 1857; M. D.,
1858, Vermont; M. D., 1860, Coll. Phys. and Sur.,
New York.

Emeritus Professor of Materia Medica and Diseases of Children in the
College of Medicine, 1868.

JOHN CLINTON SHRADER, M. D., 1865, Coll. Phys. and Sur.,
Keokuk; Long Island Coll. Hospital, Brooklyn, N. Y.;
M. A., 1877; LL. D., 1894, Western Coll.

Emeritus Professor of Obstetrics and Diseases of Women, 1869.
811 College St.

WILLIAM DRUMMOND MIDDLETON, M. D., 1868, Bellevue,
N. Y.; M. A., 1885, Iowa.

Professor of Surgery, and Dean of the College of Medicine, 1869.
Davenport, Ia. (University Hospital)

SAMUEL CALVIN, M. A., 1874, Cornell; Ph. D., 1888, Lenox.

Professor of Geology, 1874. 522 N. Clinton St. (Science Hall, first floor)

†EMLIN MCCLAIN, Ph. B., 1871; B. A., 1872; LL. B., 1873;
M. A., 1882; LL. D., 1891, Iowa; LL. D., 1891, Findlay
College.

Professor of Law, and Chancellor of the College of Law, 1881.
8 Bloomington St. 14 (Old Capitol)

THOMAS HUSTON MACBRIDE, B. A., 1869; M. A., 1873, Mon-
mouth; Ph. D., 1895, Lenox.

Professor of Botany, 1878. 728 Washington St. (Science Hall, second floor)

*Date following title indicates year of appointment to service in the
University.

†Resigned January 1, 1901.

JAMES GRANT GILCHRIST, M. D., 1863; M. A., 1890, Pennsylvania.

Professor of Surgery and Surgical Gynecology, and Secretary of the College of Homoeopathic Medicine, 1882.
215 College St. (Homoeopathic Hospital)

EMIL LOUIS BOERNER, PH. G., 1876, Philadelphia Coll. of Phar.; Phar. D., 1896, Iowa.

Professor of Practical Pharmacy, and Dean of the College of Pharmacy, 1885.
425 N. Dubuque St. (Pharmacy Laboratory)

LAUNCELOT WINCHESTER ANDREWS, PH B., 1875, Yale; M. A., PH. D., 1882, Goettingen.

Professor of Chemistry, 1885. S. Johnson St. (Chemical Laboratory)

CHARLES HERBERT COGSWELL, M. D., Hahnemann College, Chicago.

Professor of Obstetrics and Diseases of Women in the College of Homoeopathic Medicine, 1885.
Cedar Rapids, Ia. (Hom. Med. Hospital)

GEORGE THOMAS WHITE PATRICK, B. A., 1878, Iowa; B. D., 1885, Yale; PH. D., 1888, Johns Hopkins.

Professor of Philosophy, 1887.
704 N. Dubuque St. (Psychological Laboratory)

CHARLES BUNDY WILSON, B. A., 1884; M. A., 1886, Cornell University.

Professor of German Language and Literature, and Secretary of the College of Liberal Arts, 1888.
919 E. College St. (6 Old Capitol)

LAWRENCE WILLIAM LITTIG, B. A., 1880; M. A., 1882, St. Vincent's College; M. D., 1883, Iowa; M. D., 1884, Pennsylvania; M. R. C. S., 1887, England.

Professor of Theory and Practice of Medicine, and Clinical Medicine in the College of Medicine, 1889.
102 S. Linn St.

ANDREW ANDERSON VELEN, B. A., 1877; M. A., 1880, Carleton College.

Professor of Physics, 1883.
707 N. Dubuque St. (Physics Bldg.)

LAENAS GIFFORD WELD, B. S., 1883; M. A., 1885, Iowa.

Professor of Mathematics, 1886.
612 N. Dubuque St. (Armory, second floor)

CHARLES CLEVELAND NUTTING, B. A., 1880; M. A., 1882, Blackburn University.

Professor of Zoology, and Curator of the Museum of Natural History, 1886.
922 E. Washington St. (Science Hall, third floor)

JAMES RENWICK GUTHRIE, B. S., 1878; M. A., 1881, Lenox; M. A., 1884, Iowa.

Professor of Obstetrics and Gynecology in the College of Medicine, 1889.

ISAAC ALTHAUS LOOS, B. A., 1876; M. A., 1879, Otterbein; B. D., 1881, Yale; D. C. L., 1898, Penn Coll.

Professor of Sociology and Political Philosophy, 1889.
22 E. Bloomington St. (4 Old Capitol)

14 THE STATE UNIVERSITY OF IOWA

- SAMUEL HAYES, B. S., 1869 ; M. S., 1876, Michigan ; LL. B., 1891, Iowa.**
 Professor of Law, 1891. 614 N. Dubuque St. (11 Old Capitol)
- JOSEPH JASPER MCCONNELL, B. A., 1876 ; B. DL., 1878 ; M. A., 1880, Iowa.**
 Professor of Pedagogy, Inspector of High Schools, and Dean of the Summer Session, 1891. 331 Summit St. (Clinton Street Bldg.)
- ELBERT WILLIAM ROCKWOOD, B. S., 1884, Amherst ; M. D., 1895, Iowa.**
 Professor of Chemistry and Toxicology, 1888. 1011 Woodlawn. (Chemical Laboratory)
- GEORGE ROYAL, M. D., 1882, N. Y. Hom. Med. Coll.**
 Professor of Materia Medica and Therapeutics, and Dean of the College of Homœopathic Medicine. 1234 Sixth Ave., Des Moines, Iowa. (Hom. Hospital)
- JAMES WILLIAM DALBEY, B. S., 1885 ; M. D., 1888, Illinois Coll.,**
 Professor of Ophthalmology in the College of Medicine, 1889. Cedar Rapids, Ia. (Faculty Room, Med. Hall)
- CHARLES SUMNER CHASE, B. A., 1871, Cedar Valley Sem. ; B. S., I. S. C., Ames ; M. A., 1876, Iowa ; M. D., 1882, Rush Medical Coll.**
 Professor of Materia Medica and Therapeutics in the College of Medicine, 1892. Waterloo, Ia. (Faculty Room, Med. Hall)
- FRANK JOHN NEWBERRY, M. D., 1888, Chicago Hom. Med. Coll. ; M. D., 1891, Illinois Medical ; M. S., 1893, Upper Iowa University ; O. et A. Chir., 1890, New York Ophthalmic.**
 Professor of Ophthalmology, Otolaryngology, and Paedology in the College of Homœopathic Medicine, 1890. 325 Summit St. (Hom. Hospital)
- WALTER LAWRENCE BIERRING, M. D., 1892, Iowa.**
 Professor of Bacteriology and Pathology, 1893. Cor. Governor St. and Iowa Ave. (Medical Hall)
- WILLIAM CRAIG WILCOX, B. A., 1888 ; M. A., 1891, University of Rochester.**
 Professor of History, 1894. 629 N. Dubuque St. (10 South Hall)
- FRANK THOMAS BREENE, D. D. S., 1883 ; M. D., 1893, Iowa.**
 Professor of Operative and Clinical Dentistry, and Therapeutics, 1888. 419 N. Clinton St. (Dental Hall)
- WILLIAM S. HOSFORD, B. A., 1883 ; D. D. S., 1892, Iowa.**
 Professor of Dental Prosthesis, and Dean of the College of Dentistry, 1883. 505 College St. (1 Dental Hall)
- FREDERIC C. L. VAN STEENDEREN, M. A., 1893, Penn. Coll.**
 Professor of French Language and Literature, 1893. 309 Church St. (8 South Hall)
- ALFRED VARLEY SIMS, C. E., 1888, Univ. of Pennsylvania.**
 Professor of Civil Engineering, 1895. Bloom Terrace. (South Hall, first floor)

- JOHN WALTER HARRIMAN, M. D., 1891, Iowa.**
 Professor of Anatomy, and Director of Hospital, College of Medicine,
 1896. 1 Bloom Terrace. (Medical Hall)
- MARTIN JOSEPH WADE, LL. B., 1886, Iowa.**
 Professor of Medical Jurisprudence in the College of Medicine. and
 Lecturer on Evidence in the College of Law. N. Clinton St.
- WILLIAM HARPER DEFORD, B. A., 1880, W. Maryland Coll. ;**
 D. D. S., 1882, Baltimore; M. A., 1883, W. Maryland
 Coll.; M. D., 1883, Baltimore.
 Professor of Oral Pathology and Hygiene in the College of Dentistry,
 1892. Cedar Rapids, Ia. (Dental Hall)
- *GILBERT LOGAN HOUSER, B. S., 1891; M. S., 1892, Iowa.**
 Professor of Animal Morphology and Physiology, 1892.
 422 Iowa Ave. (Science Hall, first floor)
- BENJAMIN FRANKLIN SHAMBAUGH, Ph. B., 1892; M. A., 1893,**
 Iowa; Ph. D., 1895, Pennsylvania.
 Professor of Political Science, 1895. 104 Market St. (Old Capitol)
- CHARLES MOORE ROBERTSON, B. S., 1885; M. A., 1888; M. D.,**
 1888, Iowa.
 Professor of Otolology, Rhinology, and Laryngology in the College of
 Medicine, 1896. Davenport, Ia. (Medical Hall)
- WILLIAM ROBERT WHITEIS, B. S., 1892; M. D., 1895; M. S.,**
 1895, Iowa.
 Professor of Histology and Embryology in the College of Medicine.
 1896. 425 Iowa Ave. (Histological Laboratory)
- H. SANGER RICHARDS, Ph. B., 1892, Iowa; LL. B., 1895, Har-**
 vard.
 Professor of Law, 1896. 19 E. Market. (Old Capitol)
- LEE WALLACE DEAN, B. S., 1894; M. S., 1896; M. D., 1896**
 Iowa.
 Professor of Physiology, 1896. S. Clinton St (Medical Hall)
- ELMER ALMY WILCOX, B. A., 1891, Brown.**
 Professor of Law, 1899. 114 No. Capitol St. (12 Old Capitol)
- CLARK FISHER ANSLEY, B. A., 1890, Nebraska.**
 Professor of English, 1899. 725 N. Linn St. (6 South Hall)
- FREDERICK BECKER, M. D., 1875, Hom. Med. Coll. of Mis-**
 souri; M. D., 1882, Coll. Phys. and Sur., St. Louis.
 Professor of Theory and Practice of Medicine in the College of Homoeo-
 pathic Medicine, 1899. Clermont, Ia. (H. M. Hospital)
- LEONA ANGELINE CALL, B. A., 1880; M. A., 1883, Iowa.**
 Professor of Greek Language and Literature, 1885.
 21 N. Dubuque St. (Close Hall, second floor)
- ALDEN ARTHUR KNIPE, M. D., 1896, Pennsylvania.**
 Professor and Director of Physical Culture, 1900.

*Absent on leave, 1900-1901.

- THE REV. HENRY EVARTS GORDON, B. A., 1879, Amherst.
Professor of Public Speaking, 1900.
113 N. Clinton St. (Old Capitol)
- THE REV. ARTHUR FAIRBANKS, B. A., 1886, Dartmouth; Ph.
D., 1890, Freiburg, i. B.
Professor of Greek Literature and Archæology, and Secretary of the
Graduate Faculty, 1900. 311 Ronalds St. (Close Hall)
-
- CHARLES SCOTT MAGOWAN, C. E., 1884; M. A., 1887, Iowa.
Assistant Professor of Civil Engineering, 1885.
304 Summit St. (South Hall, first floor)
- BOHUMIL SHIMEK, C. E., 1888, Iowa.
Assistant Professor of Botany, and Curator of the Herbarium, 1895.
(Science Hall, second floor)
- HENRY FREDERICK WICKHAM, M. S., 1894, Iowa.
Assistant Professor of Zoology, and Assistant Curator of the Museum
of Natural History, 1894. 911 Iowa Ave. (Science Hall, third floor)
- ARTHUR G. SMITH, Ph. B., 1891; M. A., 1895, Iowa.
Assistant Professor of Mathematics, 1893.
422 N. Dubuque St. (West Bldg., second floor)
- FRANKLIN HAZEN POTTER, B. A., 1892; M. A., 1895, Colgate.
Assistant Professor of Latin, 1895. 527 N. Linn St. (7 Old Capitol)
- CARL EMIL SEASHORE, B. A., 1891, Gustavus Adolphus;
Ph. D., 1895, Yale.
Assistant Professor of Philosophy, 1897.
208 Fairchild St. (Psychological Lab.)
- ALICE YOUNG, B. L., 1896, Minnesota.
Assistant Professor of English, and Dean of Women, 1900.
111 N. Clinton St. (7 and 12 South Hall)
- FREDERIC E. BOLTON, B. S., 1898; M. S., 1896, Wisconsin;
Ph. D., 1898, Clark.
Assistant Professor of Pedagogy, 1900.
122 Court St. (Clinton Street Bldg.)
-
- GERSHOM HYDE HILL, B. A., 1871, Iowa Coll.; M. D., 1874
Rush Medical; M. A., 1881, Iowa Coll.
Lecturer on Insanity, 1890. Independence, Iowa
- HORACE EMERSON DEEMER, LL. B., 1879, Iowa.
Lecturer on Guaranty and Suretyship, and the Conducting of Law
Business, 1899.
- WILLIAM J. BRADY, D. D. S., 1886, Iowa.
Lecturer on Orthodontia and Dental Technic 1899.
1027 College St. (Dental Hall)
- JAMES FRED CLARK, B. D., 1886; M. A., 1889, Iowa; M. D.,
Pennsylvania.
Lecturer on Hygiene in the College of Medicine, 1899. Fairfield, Iowa.

- JOHN BLAIR KESSLER, M. D., 1887, Iowa.
Lecturer on Dermatology in the College of Medicine, 1899.
Cor. Clinton and Washington Sts.
- ERNEST ALBERT ROGERS, D. D. S., 1892, Iowa.
Lecturer on Dental Anatomy and Regional Anatomy, and Clinical
Demonstrator in the College of Dentistry.
- ELI GRIMES, M. D., 1897, Iowa.
Lecturer on Electro-Therapeutics in the College of Medicine, 1900.
Des Moines, Iowa
- GEORGE EDWARD DECKER, B. S., 1895; M. D., 1897, Iowa.
Lecturer on Pædiatrics in the College of Medicine, 1900.
Davenport, Iowa
- WILLIAM LECLAIRE BYWATER, M. D., 1897, Iowa; O. et A.
Chir., 1900, New York Ophthalmic.
Lecturer on Diseases of Women in the College of Homœopathic Medi-
cine, 1900. 325 Summit St. (Homœopathic Hospital)
- LUTHER ALBERTUS BREWER, B. A., 1883; M. A., 1886, Pennsyl-
vania College.
Lecturer on Journalism, 1900. University Publisher. Cedar Rapids, Ia.
- BENJAMIN RICHARD JOHNSTON, M. D., Hering Coll., Chicago.
Assistant to Chair of Theory and Practice in the College of Homœo-
pathic Medicine, 1900.
- JENNINGS PRICE CRAWFORD, M. D., 1883, Iowa.
Lecturer on Operative Technic, 1900. Davenport, Iowa
-
- BERTHA GILCHRIST RIDGWAY,
Librarian, 1898. 4 Jefferson St. (Library)
- BESSIE G. PARKER, PH. B., 1883, Iowa.
Assistant in the Library, 1898 14 Burlington St. (Library)
- MARY K. HEARD, PH. C., 1892, Michigan.
Cataloguer in the General Library, 1899. 127½ College St.
- JENNIE I. FENTON,
Assistant in the Library. 4 Jefferson St. (Library)
- H. CLAUDE HORACK, LL. B., 1900, Iowa.
Law Librarian.
- BERTHA BELLE QUAINANCE, B. A., 1899, Nebraska.
Registrar, 1900. 111 N. Clinton St. (Old Capitol)
-
- FREDERIC BERNARD STURM, B. A., 1892, Michigan.
Instructor in German, 1892. 422 Iowa Avenue. (5 South Hall)
- HERBERT C. DORCAS, PH. B., 1895, Iowa.
Instructor in Pedagogy, and University Examiner, 1895.
427 Ronalds St. (Psychological Laboratory, second floor)

- WILLIAM EDWARD BARLOW, M. A., 1899, Cambridge, Eng.
 Demonstrator of Chemistry, 1892. Fairchild St. (Chem. Lab.)
- CHARLES BALL LEWIS, D. D. S., 1896; M. D., 1899, Iowa.
 Demonstrator in the College of Dentistry, 1896.
 114 S. Linn St. (Dental Hall)
- FRANK BOYNTON JAMES, D. D. S., 1897, Iowa.
 Demonstrator in the College of Dentistry, 1895.
 121 Iowa Ave. (Dental Hall)
- WILBER JOHN TEETERS, B. S., 1893; M. S., 1898, Mt. Union
 College; Ph. C., 1895, Michigan.
 Demonstrator of Chemistry, 1895. 222 Reynolds St. (Chem. Lab.)
- LOUISE ELIZABETH HUGHES, Ph. B., 1878; M. A., 1881; B. A.,
 1899, Iowa.
 Instructor in Latin, 1896. 122 N. Capitol St. (Close Hall)
- WILLIAM ROLLA PATTERSON, B. D., 1888; B. S., 1889, Iowa
 State Normal; Ph. B., 1895, Iowa; Ph. D., 1898, Penn-
 sylvania.
 Instructor in Statistics and Economics, 1898.
 505 Washington St. (4 Old Capitol)
- CLARENCE WILLIS EASTMAN, B. S., 1894, Worcester Poly-
 technic; M. A., Ph. D., 1898, Leipzig.
 Instructor in German, 1898. 430 N. Clinton St. (Close Hall)
- CARL LEOPOLD VON ENDE, B. S., 1893; M. S., 1894, Iowa;
 Ph. D., 1899, Goettingen.
 Instructor in Chemistry, 1899. 220 S. Johnson St. (Chem. Lab.)
- JOHN VAN ETEN WESTFALL, B. S., 1895, Cornell University;
 Ph. D., 1898, Leipzig.
 Instructor in Mathematics, 1899. 218 S. Linn St. (Armory)
- *AUGUST VON ENDE, B. S., 1897, Iowa.
 Assistant Instructor in Mathematics, 1899.
 220 S. Johnson St. (Armory)
- GEORGE T. FLOM, B. L., 1893, Wisconsin; M. A., 1894, Van-
 derbilt; Ph. D., 1899, Columbia.
 Instructor in Charge of Scandinavian Languages and Literatures, 1900.
 618 N. Dubuque St. (6 Old Capitol)
- JOHN DAVIS BATCHELDER, B. A., 1894, Vermont; LL. B., 1895,
 Minnesota.
 Instructor in French, 1900. St. James Hotel. (Close Hall)
- RUSSELL D. GEORGE, M. A., 1898, McMaster University, To-
 ronto.
 Instructor in Geology, 1900. 704 N. Dubuque St. (Science Hall)

*Resigned January 1, 1901.

- SIVERT N. HAGEN, B. A., 1896, Luther College; Ph. D., 1900, Johns Hopkins.**
 Instructor in English, 1900. 714 N. Linn St. (South Hall)
- CHARLES F. LORENZ, B. S., 1897; M. S., 1898, Iowa.**
 Instructor in Physics, 1900. 215 Ronalds St. (Physics Lab.)
- HARRY GRANT PLUM, B. PH., 1894; M. A., 1896, Iowa.**
 Instructor in History, 1900. 419 N. Dubuque St. (South Hall)
-
- JOHN J. LAMBERT, B. Di., 1896; M. Di., 1897, Iowa State Normal; B. PH., 1899, Iowa.**
 Assistant Instructor in Animal Morphology and Physiology, 1898.
 119 N. Capitol St. (Science Hall)
- HENRY MAX GOETTSCH, B. S., 1899; M. S., 1900, Iowa.**
 Demonstrator of Chemistry in the College of Medicine, 1900.
 912 Bowery St.
- GORDON FOLLETT HARKNESS, B. S., 1900, Iowa.**
 Commandant in Charge of Military Science and Tactics, 1900.
 804 College St.
- JOHN T. McCLINTOCK, B. A., 1894, Parsons College; M. D., 1898, Iowa.**
 Demonstrator of Anatomy, Pathology and Bacteriology in the College of Medicine, 1898.
 411 S. Dubuque St. (Medical Hall)
- FRANCIS NEWTON BRINK, B. PH., 1899, Iowa.**
 Assistant Instructor in Chemistry, 1898.
 222 N. Dubuque St. (Chemical Laboratory)
- SAM BERKELEY SLOAN, B. A., 1899, Nebraska.**
 Assistant Instructor in English, 1900. 230 Fairchild St. (South Hall)
- CLYDE B. COOPER, B. A., 1897, Nebraska.**
 Assistant Instructor in English, 1900. 15 Harrison St. (South Hall)
- GAYLORD D. WEEKS,**
 Assistant Instructor in Civil Engineering, 1900.
 304 Summit St. (South Hall)
-
- H. HEATH BAWDEN, B. A., 1893, Denison University; Ph. D., 1900, Chicago.**
 Teaching Fellow in Philosophy, 1900. Gilbert St. (Clinton St. Bldg.)
- GEORGE LUTHER CADY, B. A., Olivet College.**
 Honorary Fellow in Sociology, 1900. Dubuque St.
- SIMEON E. THOMAS, B. S., Upper Iowa Univ.; M. A., Iowa.**
 Fellow in Political Science, 1900. 1014 E. College St. (Old Capitol)
- J. E. CONNER, B. A., 1891, Iowa.**
 Fellow in Economics and Sociology, 1900.
 419 N. Dubuque St. (Old Capitol)
- KATHERINE PAINE, B. PH., 1899, Iowa.**
 Fellow in Latin, 1900. 513 Summit St. (Old Capitol)

- MABEL C. WILLIAMS, B. PH., 1899, Iowa.
Fellow in Philosophy, 1900. (Clinton St. Bldg.)
- O. P. JOHNSTONE,
Fellow in Chemistry, 1900.
- CHARLES L. SMITH, B. A., 1891, Iowa.
Fellow in Histology, 1900. 222 Ronalds St.
-
- LEE P. SIEG, B. S., 1900, Iowa.
Scholar in Physics, 1900. 211 E. Davenport St. (Physics Lab.)
- T. WILBERT KEMMERER, B. S., 1900, Iowa.
Scholar in Pathology and Bacteriology, 1900. 20 Van Buren St.
- PERCIVAL HUNT, B. A., 1900, Iowa.
Scholar in English, 1900. 329 N. Dubuque St.
- ELEANOR E. HATCH, B. A., 1898, Iowa.
Scholar in English, 1900. 222 Fairchild St.
- FRANK A. STROMSTEN, B. S., 1900, Iowa.
Scholar in Morphology, 1900. 1017 College St.
- S. T. TAMURA, B. S., 1900, Simpson College.
Scholar in Mathematics, 1900. 1718. Madison St.
- WILLIAM E. BECK, B. S., 1900, Iowa.
Scholar in Mathematics, 1900. 518 S. Clinton St.
- DAVID JONES, B. A., 1900, Penn College.
Scholar in History, 1900. 307 S. Capitol St.
-
- ZADA MARY COOPER, PH. G., 1897, Iowa.
Assistant in the Pharmacy Laboratory. 422 S. Dubuque St. (Pharm. Lab.)
- LEORA JOHNSON, M. D., 1890, Iowa.
Clinical Assistant to the Chair of Surgery, College of Homœopathic
Medicine, 1890. 12 N. Clinton St. (Hom. Hospital)
- RAYMOND E. PECK, M. D., 1897, Iowa.
Assistant to the Chair of Surgery. Davenport, Ia.
- BERTHA C. WILLIAMS, B. PH., 1888, Iowa.
Assistant in French, 1900. 331 S. Dubuque St.
- LYELL REPPERT,
Assistant in Histology. 521 S. Capitol St.
- A. W. STARBUCK, D. D. S., 1898, Iowa.
Assistant in Operative Dentistry. 227 N. Dubuque St.
- MABEL R. MORGAN,
Assistant in Physical Training for Women, 1900. 603 N. Dubuque St.
- O. E. MCCARTNEY, D. D. S., 1900, Iowa.
Assistant in Prosthetic Dentistry. 227 N. Dubuque St.

- JAMES ELLIS GOW,**
Undergraduate Assistant in Botany, 1900. 122 N. Capitol St.
- C. I. LAMBERT,**
Undergraduate Assistant in Botany, 1900.
- W. M. BOEHM,**
Undergraduate Assistant in Astronomy, 1900.
- DENNIS FRANCIS FITZPATRICK,**
Undergraduate Assistant Demonstrator in Anatomy, 1900.
- BERT VIRGIL SCARBOROUGH,**
Undergraduate Assistant Demonstrator in Anatomy, 1900.
- JOHN CARVILLE,**
Assistant in Geology.
- RUDOLPH M. ANDERSON,**
Taxidermist.
- MARY A. RAFF,**
Matron of the Homœopathic Hospital.
- FLORENCE E. BROWN, PH. B., 1892, Iowa.**
Superintendent of the University Hospital.
- *PAUL G. EILERS, M. D., 1900, Iowa.**
Home Surgeon, Homœopathic Hospital, 1900.
- E. A. CANTONWINE,**
Resident Physician, University Hospital.
- CLARA B. WHITMORE, B. A., 1900, Iowa.**
Tutor in Medical Latin.

*Resigned January 1, 1901.

GENERAL INFORMATION

INCOME OF THE UNIVERSITY

The University enjoys the proceeds of the invested funds and lands originally given by the United States. This sum is supplemented by the tuition fees paid by the students.

The Twenty-Eighth General Assembly continued for another five years the one-tenth of a mill tax for building purposes. The annual income of this tax, amounting to about \$55,000, will afford the University opportunity for material growth. The General Assembly also enlarged the general support fund of the University by a permanent appropriation of \$50,000 a year, making with the preceding permanent appropriation an income from this source for the University of \$125,000 a year.

The total income for the current year will be about \$201,000.

The present financial outlook is an occasion for gratitude on the part of friends of the University, and enables the regents and faculty of the University to make enlarged provision for work over wide fields.

THE A. WHITNEY CARR FREE SCHOLARSHIP FUND

A number of free scholarships have been endowed by the generous donation of Mr. A. Whitney Carr, of Jordan, New York, whose beneficent purpose is fully expressed in the terms of his proposition, namely:

"I propose to give and donate to the state of Iowa, to be held in trust for and applied to the use of the State University of Iowa as hereinafter provided, fifty thousand dollars as a fund to be held in perpetuity for the creation of free scholarships in the Collegiate Department of the University for the benefit of poor and worthy young men and women who are unable to educate themselves without aid, the interest alone to be used for this purpose, the principal to be kept intact.

"I also consent that in case suitable persons for all the scholarships are not found in any year, then the amount of such unused scholarships may be loaned on interest to any worthy

persons wishing to take a post-graduate course in this University, such loans, when repaid, to be used as originally intended."

For information as to the award of one of these scholarships apply to the President of the University, Iowa City, Iowa.

BUILDINGS

The University at present occupies twelve large buildings, beautifully situated near the business center of Iowa City. They are as follows, the order being that in which they were erected :

The Old Capitol, in which are located the administrative offices and the College of Law. This building is the old State House erected in 1840.

*South Hall, the first floor and basement of which are occupied by the Engineering Department and the third floor by the Irving and Zetagathian Literary Societies. The second floor is divided into recitation rooms.

North Hall, furnishing quarters for the General Library on the second floor, and for the Physical Laboratories on the first floor and in the basement.

The Clinton Street Building, No. 14 North Clinton street, formerly the Homœopathic Hospital, now occupied by the departments of Pedagogy and Philosophy and containing the Psychological Laboratory.

The Armory, occupied by the departments of Mathematics and Military Science.

*Medical Hall, in which the two medical colleges carry on the greater part of the work which is common to the two colleges.

Natural Science Hall, in which are located the four departments of biological science of the College of Liberal Arts and also the Museum of Natural History.

The Chemical Laboratory, containing the laboratories of general, medical, and pharmaceutical chemistry and a large amphitheater.

Close Hall, the home of the Young Men's and Young Women's Christian Associations of the University. This build-

*Destroyed by fire March 10, 1901. Satisfactory arrangements have been made for buildings in which temporarily the work of departments formerly in the burned buildings may go forward. It is believed the next legislature will make provision for larger and better buildings.

ing is the property of the two associations. It contains a well-equipped gymnasium and a large auditorium, besides reading rooms, waiting rooms, parlors, committee rooms, and offices.

Dental Hall, occupied exclusively by the College of Dentistry.

The Hospital of the College of Homœopathic Medicine, affording accommodations for fifty-four patients and containing a large clinical amphitheater, dispensary, administrative office, and the library of the Homœopathic Medical College.

The Hospital of the College of Medicine, with a large amphitheater, numerous operating rooms and offices, a dispensary, and accommodations for seventy-five patients.

THE HALL OF LIBERAL ARTS

This building, now in process of erection, is 120x260 feet on the ground, is three stories and a basement in height, and will contain ninety-two recitation rooms, seminar rooms and offices, waiting rooms for gentlemen, ladies' waiting room, and a general lecture room having a seating capacity of 250. The style of the building harmonizes with that of the Old Capitol. It is built of Bedford stone, fireproofed throughout, and will be lighted with gas and electricity and equipped with a complete heating and ventilating system.

It will be occupied in September, 1901, by the departments of English, French, German, Latin, Greek, History, Sociology, Political Science, Pedagogy, Philosophy, and Mathematics.

In addition to ample lecture rooms, each department will have an office and a seminar room for the use of advanced students working under the professor in charge, and for the department of Philosophy there will be a large and well-equipped psychological laboratory.

The central station for heat, light, and power has just been completed and equipped on the west campus.

The Regents of the University have determined to devote the next proceeds of the one-tenth mill tax for building purposes to the erection of an assembly hall, armory, and gymnasium.

THE UNIVERSITY LIBRARY

The University Library contains about 60,000 volumes, not including a large number of unbound pamphlets. Reasonable progress has been made toward replacing the 25,000 volumes

lost by fire in 1897, and large orders for new books are constantly being placed. About 200 periodicals are regularly taken by the Library, which receives also the publications of many of the leading scientific societies.

The general library occupies, with its reading rooms, the entire second floor of North Hall. It includes the Talbot library, which is a large and valuable collection, originally containing about 4,500 volumes, somewhat miscellaneous in character, but chiefly pertaining to natural history, explorations, voyages, and travels. It numbers some very rare and valuable sets of books, as well as single volumes, many of them being very old, a few dating from the beginning of the sixteenth century. This collection suffered severely from fire in 1897, but is now in the hands of an expert binder, and about two-thirds of the volumes will again be ready for use in the near future.

Another collection of great interest is the Americana library, already comprising several hundred volumes, many of them rare and of considerable value. The greater number of these works have been purchased with funds subscribed for the purpose by the alumni of the University, while others have been generously contributed.

Valuable contributions to the German library, either in books or in money for the purchase of books, have been made by German-American citizens of the state.

The general library is in charge of a competent librarian and three assistants. The reading room is open daily, except Sunday, from 8:00 a. m. to 12:00 m., and from 1:00 to 5:00 p. m.,

The library of the College of Law, numbering about 10,000 volumes, occupies spacious rooms on the second floor of the Old Capitol. It contains a full series of the reports of the Supreme Court of the United States and of the courts of last resort of thirty-six states, including all the series of reports most frequently referred to; also the American Decisions; American Reports; American State Reports; Lawyers' Reports Annotated; English Ruling Cases; a collection of English Reports, which, with additions lately made, is almost complete; full series of the Reporter System; and a large collection of the latest and best law text-books.

A valuable collection of 1,200 volumes relating principally to the civil law and the history of the common law, presented to the University by Mrs. Hammond, widow of William

G. Hammond, LL. D., the first Chancellor of the Law Department, is kept in the law library as a separate collection for the use of the students of the College and others interested in such subjects. These books are kept in special cases, under the charge of the law librarian, and are accessible upon request.

The reading rooms of the law library are open for the use of students from 8:00 a. m. to 12:00 m., from 1:30 to 5:30 p. m. and from 7:00 to 9:00 p. m. of each school day; also during the forenoon of Saturday.

The Ranney Memorial Medical Library, consisting of a large number of works especially devoted to insanity and mental diseases, is open for consultation, together with a well-selected list of books on general medical subjects, to which are added each year the latest works and latest editions. The reading room, which is situated on the third floor of Medical Hall, is supplied with the current medical journals, and is open every day of the session.

The College of Homœopathic Medicine possesses a valuable professional library, located in the Homœopathic Hospital.

The special libraries of many of the departments of the University are exceedingly rich in literature of interest to the advanced student.

The reading rooms of the several libraries are liberally supplied with various daily and weekly papers of the state, generously contributed by their publishers.

MATERIAL EQUIPMENT

LABORATORIES

PSYCHOLOGICAL LABORATORY

The new Psychological Laboratory on the second floor of the Hall of Liberal Arts will be occupied during the present year (1901). It includes, besides the lecture rooms, the offices and seminar room of the department of philosophy, five commodious laboratory rooms, a work shop, and a dark room. The dark room may also be used for experiments in hearing and pressure, and has been constructed to secure the greatest possible freedom from noise and jarring. The laboratory rooms are supplied with water, gas, and electricity, complete electrical connections being made between the battery room and all other laboratory and lecture rooms.

The laboratory equipment includes: (1) Apparatus, charts, preparations, and models for use in lecture courses; (2) a complete set of apparatus for a year's laboratory course in experimental psychology, and (3) apparatus employed in special research.

The following is a partial list of apparatus: For general use: Two microscopes, a spark chronoscope with accessories, a special graphic recording apparatus, the Zimmermann kymograph with rhythm and time-sense apparatus, exposing shutters, chronometers, standard forks, batteries, motors, and induction coils. For the study of motor processes: New psychrometer, sorting apparatus, thought and action apparatus, new multiple recording apparatus, dynamometers, ergographs, spirometer, pneumograph, sphygmograph, and a new stroboscopic apparatus for the measurement of pitch in vocalization. For the lower senses: Olfactometers, algometers, several series of weights and scales, temperature finders, and apparatus for the production of gradual changes in weight and pressure. For hearing: Audiometers, sound pendulum, Koenig cylinders, Galton whistle, Appunn's reed, siren, and several sets of tuning forks and pipes. For sight: Various color mixing outfits, sixty charts illustrating color phenomena, visual illusions, etc., spectroscope, tachistoscopes, pseudoscopes, stroboscopes, perimeters, planimeter, tests for color blindness, eye muscle apparatus, lenses, vacuum tubes, and dark chamber.

The study of the nervous system is illustrated by means of a comprehensive series of charts, preserved specimens, microscopic slides, and models, including Auzoux's dissectible model of the brain.

The workshop is provided with work bench, lathe, all necessary tools, mimeograph, dissecting apparatus, etc.

LABORATORIES OF ANIMAL MORPHOLOGY AND PHYSIOLOGY

The laboratories for animal morphology and physiology occupy the west half of the first floor of the Natural Science Building, together with a portion of the basement. They are supplied with water and gas throughout, and are lighted by twenty windows.

The laboratory for the introductory courses receives light from the north. It is furnished with heavy oak, slate-topped tables, particularly adapted to the anatomical and microscopical requirements of the work. The tables will accommodate thirty students at one time.

The equipment of this laboratory includes thirty compound microscopes, as many dissecting microscopes, the requisite accessory optical apparatus, a series of over seven thousand microscopical slides, a large number of anatomical preparations, charts, and models, and the numerous pieces of minor apparatus, glassware, etc., incident to general biological work.

The laboratory for the several advanced courses is lighted from the west and south. It is furnished with tables and reagent racks designed to meet the special requirements of the work pursued here. A smaller room opening from the main one supplies the conditions desired for apparatus of constant temperature. The equipment of this laboratory embraces special microscopes, sliding microtomes of approved pattern, two Minot automatic microtomes for serial sectioning, a large Lillie water bath for paraffin imbedding, a laboratory incubator for work in embryology, a thermostat of ample size, a complete stock of biological reagents, sets of bottles for each student, a large assortment of glassware, and various pieces of physiological apparatus.

Opening from the main laboratories are smaller rooms available for those pursuing special lines of investigation. The basement laboratory is utilized for aquaria, anatomical tanks, animal cages, and appliances for various lines of special work.

A reference library in English, French, and German is kept in the laboratories, and is accessible at all times during

working hours. A subject index on the card catalogue system renders the literature more readily available.

ZOOLOGICAL LABORATORY

This laboratory has been newly equipped and is now able to furnish much better facilities than ever before. It is situated on the second floor of the Natural Science Building. The main items of the equipment are the following :

1. New laboratory tables designed especially for this work. They have glazed tops of alternating black and white squares to give a suitable background for dissecting or examining delicate objects in glass dishes, and drawers for the accommodation of dissecting tools, lenses, etc. The tables are provided with Welsbach burners in sufficient numbers to furnish the best of light for either dissecting or microscopic work, and will accommodate twenty-seven students.

2. A high grade dissecting microscope, provided with a jointed arm and twodouble a chromatic lenses, for each student. On the theory that the work in zoology can be done better with a good dissecting equipment than by relying too much on the compound microscope, this laboratory has been provided with the best dissecting microscopes and lenses that could be purchased.

3. Compound microscopes of good quality in sufficient numbers to furnish one to each two students are at present available, and it is confidently hoped that there will be one for each student before the beginning of the next collegiate year.

4. A set of ordinary dissecting tools and a Coddington lens for each student, together with a very complete equipment in the way of dissecting pans and glassware, such as watch glasses, petrie dishes, stender dishes, embryo dishes, slides, covers, etc.

5. The very extensive zoological collections in the Museum of Natural History are at the disposal of students in this department, furnishing abundant material in many groups for advanced systematic work.

In this connection should be mentioned the departmental library of zoological works, including a complete set of the "Annals and Magazine of Natural History," most of the "Challenger" Reports, and works of reference of various kinds covering the field of zoology in a general way, and admitting of

special treatment of several groups which are particularly well represented in the Museum.

BOTANICAL LABORATORY

This laboratory is located on the second floor of Natural Science Hall, and is in direct communication with the herbarium room. It is supplied with heavy oak, slate-topped tables, furnished with drawers and cases for the instruments used in microscopic work, and is arranged to accommodate thirty students at one time. Thirty compound microscopes, with necessary accessories, section-cutters, etc., are at the disposal of the students.

Connected with the main laboratory are private laboratories for students pursuing special lines of investigation. Two of these are furnished with special microscopes, a photomicrographic camera, and apparatus for investigation in vegetable physiology.

A fine stereopticon with hundreds of slides furnishes the material basis for Monday evening lectures. The laboratories are well lighted and in every way adapted to satisfactory work.

LABORATORIES OF GEOLOGY, PETROLOGY, AND PALEONTOLOGY

The equipment of the department embraces :

1. The laboratory collections, including :
 - a. An extensive collection of American and European fossils, illustrating the history and development of life from the earliest geologic ages to the present time.
 - b. Several hundred mineral specimens selected and arranged to illustrate the economic geological resources of the United States, including :
 - (1). The metalliferous products, such as the various ores of gold, silver, copper, iron, etc., and their modes of occurrence.
 - (2). The non-metalliferous products, such as coal, building materials, gypsum, etc.
 - c. A collection of rock-making minerals.
 - d. A collection of rock specimens illustrating the mineralogical composition, structure, mode of occurrence, and classification of rocks.
 - e. A large number of sections of rocks, minerals, and fossils for microscopic study in connection with the work in petrology and paleontology.

2. A series of topographical and geological maps and charts, published by the United States Geological Survey, the various state surveys, and the surveys of foreign countries; geological and physiographical models; more than a thousand lantern slides, covering every phase of geology which can be illustrated in this way; several hundred photographs of physiographic and geologic phenomena.

3. A lithological lathe for making microscopic and other sections of rocks, minerals, and fossils.

4. A number of petrographical microscopes of the most approved design; two Joly balances for specific gravity determinations; Mohs's scale of hardness, etc.

5. A complete photographic outfit, including a large photomicrographic camera.

6. A large series of negatives from which the students make prints to illustrate their permanent notebooks.

7. Equipment for determinative mineralogy.

8. A collection of crystal models, natural crystals, and crystal sections to illustrate the work in crystallography.

9. The library of the department contains over 1,000 bound volumes and about 1,000 catalogued pamphlets. In addition to the standard works on geology and related subjects, the library contains the publications of the United States Geological Survey, the reports of the various state surveys, and a number of geological publications of foreign governments.

10. Geological phenomena illustrated within easy reach of Iowa City.

The surrounding neighborhood affords many instructive examples of phenomena of interest to the student of geology. At the same time it offers unexcelled opportunities for field work in mapping, making geological sections, tracing strata from one exposure to another, and making paleontological collections. The Pleistocene deposits are of especial interest.

The boulders of tuff drift afford an opportunity for a study of several types of crystalline rocks. The available material is not only sufficient to illustrate the ordinary undergraduate courses in geology, but advanced students will find enough to occupy their time with profit for a number of years.

THE LABORATORIES OF THE COLLEGES OF MEDICINE

The pathological and bacteriological laboratory is located on the second floor of Medical Hall. It is thoroughly equipped

with new microscopes of the most modern type and all apparatus necessary for carrying on every form of bacteriological research. Each student is provided with a table, a microscope, and the necessary staining reagents.

The histological laboratory, situated on the first floor of the same building, is well lighted and thoroughly equipped with microscopes and all necessary apparatus for carrying on the work. The laboratory work comprises the preparation and study of microscopic slides showing the minute structure of the different tissues and organs of the body.

Physiological and otological laboratories are now being fitted up in a thorough manner with the most modern appliances.

THE CHEMICAL LABORATORIES

A three-story brick building, 105x150 feet on each floor, is devoted entirely to the uses of the departments of Chemistry and Pharmacy. The lecture hall is built in amphitheater form and will accommodate nearly two hundred students, every one of whom can clearly see the lecture table and any experiment that may be performed there, even from the most distant part of the room. There is also a special lecture room for students in pharmacy. The building contains a general laboratory 100 feet in length by 27 feet in minimum breadth for the use of students in the College of Liberal Arts, and two others nearly as large for those in the Colleges of Medicine and Pharmacy; also a large laboratory for advanced students, a laboratory of determinative mineralogy, and several private laboratories which may be fitted up for various special lines of research. There are also reading rooms containing the libraries of general and pharmaceutical chemistry, spectroscopy and balance rooms, engine and dynamo rooms, dark rooms for photography, store rooms, and offices.

All the rooms of the building are well lighted, cross lights being carefully avoided. Provision has been made for perfect ventilation by means of numerous air flues. The building is heated by steam, which is also freely used for various other purposes, as for drying ovens, thermostats, distillation, etc. In no respect have the designer and the architect spared any pains to meet every reasonable demand in the construction of a thoroughly modern and substantial building adapted, as perfectly as means would permit, to its special uses.

A storage battery and dynamo in connection with the gas engine furnish electricity to the various laboratories for electrolysis and other uses. Special facilities in the way of apparatus are provided for the study of physical chemistry.

PHYSICAL LABORATORY

The Physical Laboratory occupies the first floor and basement of the North Building, with an available floor space of more than 8,000 square feet.

In the basement is the large engine and dynamo room containing a gas engine which drives a shaft twenty feet long. To this shaft are belted the dynamos, of which there are six of from one to ten horse-power capacity and representing several types. Here also is a cable switchboard, meters, lamps, and other apparatus. In this room, and driven by the same engine, are three lathes, a planer, a drill press, a forge, and the usual tools for working metal. In the battery room are some fifty accumulators of different varieties. A large and commodious photometer room is supplied with a complete Kruess photometer. One basement room has been equipped as an electrical laboratory. Another room is supplied with a cabinet-maker's bench and a few woodworking tools.

On the floor above are eight rooms. The lecture room, with seats for some seventy students, is supplied with water and gas and with wires from the dynamos and the accumulators. The windows can be easily darkened, and there are conveniences for making projections by sunlight or by electric or other artificial light. A large and well-lighted room is devoted to the uses of a general laboratory, especially in the line of mechanics, and contains a number of balances, air pumps, a cathetometer, and a number of other measuring instruments. Another large room contains much of the apparatus for electrical testing. Here also is the special physical library with the journals taken for the laboratory. Three smaller rooms are given respectively to heat, light, and magnetism, and are well equipped with apparatus. There are also two offices, for the professor in charge and the assistant professor.

The laboratory is fairly well supplied with lecture apparatus, and among the instruments of precision are many of the best and finest to be had. The equipment is especially full in mechanics, optics, and electricity. Most of the apparatus has

been purchased in recent years and has been selected with great care, and some has been constructed for particular uses in this laboratory.

It may be noted that the above account of the equipment of the Physical Laboratory includes apparatus, machinery, and shop facilities for the practical work of the course in electrical engineering. The electrical and mechanical work of this course is at present carried on as a part of the work of the department of physics. The electrical equipment of the new Hall of Liberal Arts and the new heating plant will materially increase the facilities for measurements and study of electrical apparatus. This equipment is thoroughly modern and includes two large dynamos for light and power, two motors to drive fans in the heating and ventilating outfit, besides the switchboards, line construction, and other apparatus. Available to the students and within easy reach are the large power stations of the local electric lighting company and the establishments of local manufacturing concerns, all furnishing examples of the best modern practice in electrical engineering.

ASTRONOMICAL OBSERVATORY

The students' Astronomical Observatory is conveniently located on the University campus. It is furnished with a five-inch equatorial telescope by Grubb of Dublin, having circles, driving clock, position micrometer, helioscope, and solar and stellar spectroscopes; a transit instrument by William Wuerdemann of Washington; a prismatic sextant and artificial horizon by Pistor and Martins of Berlin; clock; chronometer; chronograph, etc.

The mathematical and astronomical library comprises over one thousand volumes, including many rare and valuable works. The periodical literature devoted to these branches of science is also well represented.

CIVIL ENGINEERING LABORATORIES AND DRAUGHTING ROOMS

The Hydraulic Laboratory is a room having a floor space of 575 square feet. The equipment for 1900-1901 will include the necessary tanks with standard orifices, tubes and weirs for free and submerged flow, stop watch, hook gauge, water meters of various kinds, pressure gauges, and other necessary appliances for illustrating hydraulic principles; also a Price's pneumatic current meter for field gaugings.

The iron, steel, and wood laboratory contains an autographic torsion testing machine, a 100,000-pound Riehle machine, a standard Riehle's abrasion cylinder for testing paving brick, lathe and grinders for preparation of specimens, and an engine which furnishes power for their operation.

The cement laboratory contains a Riehle 1,000-pound cement tester, a Fairbank's automatic shot-stop cement tester of same capacity, briquette-making machines of the Sims and S. U. I. types, and all necessary tanks, mixing sinks, molds, etc., for making complete tests of cement.

The draughting rooms are at present located on the first floor of South Building and are well lighted, and equipped with models for drawing, and descriptive geometry, and other necessary appliances.

The department is provided with a field equipment ample to permit full and complete practice in the different kinds of surveying; this equipment consists of a vernier compass, a railroad compass, a solar compass, levels and transits, with stadia, gradienter, and Saegmuellar solar attachment; also a plane table of the latest approved form, with best telescopic alidade and all necessary attachments, together with all the rods, flags, chains, tapes, etc., that are necessary to equip fully the various classes and divisions in surveying without interfering with each other in their work.

The engineering library consists of over 600 volumes of the standard works on the various engineering subjects. These books are selected from and are a part of the general library, but are arranged in a convenient room adjacent to the drawing rooms, and are freely used by the engineering students. Among the engineering journals are: *Engineering News Engineering* (London), *Engineering Record*, *Municipal Engineer*, *Engineering Magazine*, *Yale Scientific Monthly*, *Engineering and Mining Journal*, *Street Railway Review*, *Railway and Engineering Review*, *Canadian Engineer*, *Compressed Air*, *American Engineer*, *American Architect*, *Journal Western Engineering Society*, *Science and Industry*, *Brick*, *The Clay Worker*, *Technology Review*, *Technograph*, *Journal of the Franklin Institute*, and others, many being exchanges of *The Transit*. A catalogue of the books in this library has been printed and will be sent on application.

Students in any engineering or science courses are eligible for membership in the Engineering Society. This society

meets each week, and papers upon engineering or scientific subjects are prepared and read by the students.

An engineering journal (*The Transit*) is published annually by the University. It is edited by the members of the Engineering Society, and contains the results of original research in engineering and scientific problems by undergraduate students and alumni.

NEW ENGINEERING EQUIPMENT

During the year 1901-1902 the engineering equipment of the University will be very materially increased. The completion of the new heating plant and Hall of Liberal Arts will make available West Building for the purposes of laboratories, shops, and lecture and recitation rooms to supplement the space now occupied in the basements and first floors of North and South Buildings. High pressure steam for power to supplement the day currents from the dynamos at the new heating and power plants will be available at all times, either from the main of the new heating system or from the boilers of the present heating plant now located in the basement of West Building.

The present design contemplates the installation of sufficient additional machinery for the manufacture of much of the new equipment needed, besides the purchase of special apparatus.

For a detailed description of the present equipment in Electrical Engineering, see Physical Laboratory, page 29, and for Civil Engineering see Civil Engineering Laboratories, page 30.

NATURAL HISTORY COLLECTIONS

GEOLOGICAL COLLECTIONS

1. A large series of building stones, fossils, earths, etc., collected chiefly in the prosecution of the state geological surveys between the years 1856 and 1870. These collections are constantly increasing by contributions from various sources.

2. The Calvin collection of American and European fossils.

3. Mineralogical collections embracing the metalliferous, non-metalliferous, and rock-making minerals.

4. The petrological collection includes several hundred rock-specimens illustrating the various types of igneous and sedimentary rocks, their mineralogical composition and structural features.

5. A collection of cretaceous cycads from the Dakota sandstone of the Black Hills.

6. Recent extensive collections illustrating the cretaceous faunas and economic geology of the Black Hills.

7. A collection illustrating general economic geology.

A beautifully preserved skeleton of a mosasaur (*Platecarpus*) has lately been added to the geological collections through the generosity of the Davenport Alumni Association.

HERBARIUM

The herbarium is located in one room on the second floor of the Natural Science Building. It contains:

1. A very large and constantly increasing collection of fungi, both parasitic and saprophytic, from all parts of North and Central America. To be classed here is also a large collection of the myxomycetes from all parts of the world.

2. A large collection of ferns and mosses from both hemispheres, including an especially complete series from tropical America.

3. A collection of lichens, representing most of the species of the United States.

4. A collection of many thousand flowering plants, representing very fully the flora of North America, and especially rich in Central American and European forms. The number of plants in the herbarium exceeds 200,000.

5. A collection of seeds and dry fruits, including cones, representing the flora of North America chiefly, but containing also much material from the tropics.

6. A collection of the principal woods of the United States.

The herbarium collections, thanks to friends and collectors in various parts of the world, are steadily increasing in extent and value. It is hoped that private collectors will hereafter as heretofore find the University a proper place for the deposit and care of collections of plants.

Botanical field work has been conducted by representatives of the department in various parts of the state and country. Chief among the expeditions was that of Miss Hattie M. Clearman to Idaho. Professor Shimek has also continued his work in northwestern Iowa in connection with the United States Division of Forestry. These expeditions have added materially to the collections,

Special thanks for material are due to James E. Gow, Mrs. M. F. L. Fitzpatrick, J. M. Holzinger, H. F. Wickham, J. E. Cameron, Lucy M. Cavanagh, Hattie M. Clearman, C. W. Irish, P. C. Myers, E. Bethel, Katherine Vale, Dr. J. L. Pickard, Lieutenant George S. Gibbs, G. B. Rigg, A. F. Kovarik, J. C. Roushar, Mabel Cameron, Mary M. McGuire, Field Columbian Museum, H. M. Griffith, R. L. Smith, J. A. Anderson.

ZOOLOGY

MUSEUM OF NATURAL HISTORY

The Museum of Natural History has attained a rank second to none in the universities of the West and is daily becoming more valuable through donations of material by friends of the University.

By the generosity of the collector the Hornaday collection of mammals and birds has become the property of the University. This collection contains many rare forms of mammals and birds, and is particularly rich in typical exotic forms from India and Australia.

Mr. D. H. Talbot of Sioux City has donated to the University his extensive collection of natural history specimens and minerals. This collection contains many thousand specimens, being especially rich in mammals, birds, and anatomical preparations.

During the last twelve years expeditions for zoological explorations in the interest of the University have visited the following regions: Bahama Islands, Bay of Fundy, Rocky Mountain region, Pacific coast, Alaska, mountains of Tennessee, the Winnipeg country, Lake Athabasca, Great Slave Lake, the Arctic coast, Siberia, Cuba, Florida Keys, Atlantic coast, British West Indies, and the Bay of Naples.

More than half of the natural history collection is included in the *reserve series*, which has been arranged and labeled with the intention of making the material of the utmost practical use to students of natural history.

A library of reference for the use of students of zoology is placed on the museum floor, and a free use of all the material in the various collections is encouraged, for which purpose a cheerful and convenient study room has been provided for the use of students and specialists.

ZOOLOGICAL COLLECTIONS

1. **MAMMALS**—A large series of mounted specimens is now on exhibition, the great majority being rare and valuable foreign species, including a series of marsupials which surpasses anything of the kind west of the Alleghanies.

Besides the Hornaday collection, the museum contains a large number of native mammals, about forty specimens being from the Pacific coast. A good series of the larger mammals of North America has been secured through the kindness of Mr. D. H. Talbot, and the efforts of Dr. Frank Russell, who returned from the far north with an exceptionally fine series of the larger mammals of that region, including five good specimens of the musk ox.

2. **BIRDS**—The ornithological material in the museum now embraces about 11,000 specimens, about 1,000 of which are exhibited in the mounted series, the remainder being included in the study series for the use of students and specialists.

Besides a large collection of native birds, containing nearly all the species found in Iowa, the following collections are noteworthy:

The Hornaday collection of birds, containing one hundred and twenty-five specimens, nearly all of which are exotics, and many, such as the ostrich and the emu, of great value.

The Bond collection of birds of Wyoming, donated, together with a large collection of Iowa birds, by Mr. Frank Bond of Cheyenne, Wyoming.

The Harrison collection of British game birds and birds of prey, a large and valuable series, donated by John Harrison, Esq., of England.

The Talbot collection of American birds, embracing thousands of specimens, mostly from the Mississippi valley.

A collection of 500 birds from the N. W. Provinces of British America, made by the Curator, Dr. Frank Russell, and Professor A. G. Smith.

A collection of about 600 specimens of birds from the Winnipeg country, Great Slave Lake, Athabasca Lake, the Mackenzie River, and the Arctic coast, made by Dr. Frank Russell.

The Curator has donated his study series of over 800 bird skins from Central America and the Bahama Islands.

3. REPTILES—The alcoholic collection of reptiles has received many important additions, among which may be mentioned a number of specimens from India, donated by Rev. A. Loughridge, and many native specimens presented by students. Ex-regent B. F. Osborn has donated his large collection of alcoholic specimens, which consists principally of reptiles, thus nearly doubling the series of these forms.

4. FISHES—Professor B. Shimek has presented the Museum with his entire collection of fresh water fishes, of which the Museum now has seven hundred specimens, besides a number of marine forms.

A collection of 135 species of the fresh water fishes of Central and western North America has been donated to the University by the United States Fish Commission.

5. INSECTS—Assistant Professor Wickham is now engaged in assorting a large series of the coleoptera and lepidoptera of North America, which he has generously donated. All of the foreign coleoptera in his large collection are now the property of the Museum.

6. MARINE INVERTEBRATES—A collection consisting of several thousand specimens of crustaceans, mollusks, star fishes, corals, sponges, etc., has been supplemented by a valuable series consisting of several hundred alcoholic specimens, many of which are the gift of the United States Fish Commission.

The alcoholic collection has been enlarged by marine forms collected during two expeditions to the Bahamas, Cuba, and the Florida Keys, and thousands of specimens have been added by collections made in the Bay of Fundy by Professors Calvin and Nutting.

A carload of marine specimens was secured by the Bahama expedition in 1893. This collection contains a large number of deep-water forms, thus giving the University special advantages in the matter of marine materials for exhibition and study.

A valuable series of marine forms of the more fragile and delicate kinds, such as medusæ, sea-anemones, etc., has been secured from the *Stazione Zoologica* at Naples, where the most superb preparations of these beautiful forms are made. These are supplemented by a number of gelatine models of medusæ, hydroids, etc., imported from Germany.

7. TERRESTRIAL AND FRESH WATER MOLLUSCA—The Shimek collection of land and fresh water shells, embracing

nearly all the species known to occur in Iowa, together with many exotic species.

8. **OSTEOLOGICAL PREPARATIONS**—A series of mounted skeletons, illustrating the osteology of typical series of vertebrates, is of the greatest value to students of comparative anatomy and zoology. The skeleton of a large whale (*Balaena Biscayensis*) was secured in 1898.

ETHNOLOGICAL COLLECTIONS

There is an abundance of ethnological material in the Museum, illustrating the handiwork of the Mound Builders, Pueblo Indians, Zunis, Moquis, Acomas, Mojaves, Crees, Dog Ribs, Metis, Kosmolliks, Piegans, Tchukchees, and Navajos, together with skulls and other remains of the ancient and modern inhabitants of America.

Mr. D. H. Talbot of Sioux City has added very largely to this department of the Museum. Dr. Russell has been active in securing ethnological specimens illustrating the life and manufactures of the Crees, of other northern tribes of Indians, and of the Esquimaux.

Mr. H. M. Griffith of the Fifty-first Iowa Volunteers has brought from Luzon a valuable collection which he has generously donated to the Museum.

ITEMS OF GENERAL INTEREST

UNIVERSITY PUBLICATIONS

Natural History Bulletin—The laboratories of natural history inaugurated in 1888 the publication of bulletins for the purpose of preserving a record of the work prosecuted along the lines of botany, geology and zoology. Four volumes have thus far appeared in sixteen numbers, and material for the fifth volume is ready for publication. This may be expected within the next year. The numbers have a large circulation and are sent *gratis* to all correspondents from whom the University receives an equivalent, either in publications or in material. To others the price is 50 cents a number.

The Transit is an engineering journal published annually by the University. It is edited by the members of the Engineering Society, and contains the results of original research in engineering problems by alumni and undergraduate students. Seven volumes have appeared, the first two containing two numbers each.

The Law Bulletin has been published quarterly since 1892, the last issue being No. 38. It is devoted to the discussion of current legal questions of interest to the students in the College of Law.

The Bulletin of the Homoeopathic Medical College has been published semi-annually since 1895, with the exception of the last year. Eight numbers have appeared, the last being No. 2 of Vol. II.

The University of Iowa Studies in Psychology is a semi-annual publication devoted to experimental psychology, begun in 1897. Two volumes have been published. Volume III is ready for the press.

Documentary Material Relating to the History of Iowa—Vol. I of this series contains Nos. 1 to 8, inclusive; Vol. 2, Nos. 9 to 16. The successive numbers have been published by the State Historical Society, except Nos. 9, 10, 11, and 12, which

have been issued by the University Press. Volume III is in the hands of the printer. The series is edited by the professor of Political Science.

The State University of Iowa Studies in Sociology, Economics, Politics and History—Volumes I and II of this series, containing respectively 296 and 150 pages, have already appeared and will be followed by others.

Provision has been made for the publication of bulletins of Physical Science, Pedagogy, and Linguistic Science.

In ordering any of the above publications address the Secretary of the University.

STUDENT PUBLICATIONS

The Vidette-Reporter—A tri-weekly newspaper.

The Quill—A weekly literary publication.

The Hawkeye—A University annual published by the junior class.

LITERARY AND SCIENTIFIC SOCIETIES

The literary and scientific societies maintained by the faculty and students of the University afford an important means of general culture, scientific research, and literary and forensic training, and thus form a valuable element as well as an attractive feature in University life.

Of those conducted by the faculty the Baconian has for its object discussion of scientific questions; the Graduate Club is devoted to the interests of the Graduate College; the Political Science Club discusses questions in history, politics, economics, law, education, and ethics; the Whitney Society is devoted to the field of language and literature and the methods of teaching these subjects; the English Club is an organization of members of the department of English and graduate students in English; the Edda is devoted to the interests of Scandinavian languages and literature.

The Phi Beta Kappa Society elects to membership, on the basis of high scholarship, a certain number from the graduating class who have completed the classical or philosophical course.

The Sigma Xi is organized to encourage original research in science, and elects to membership from the senior class such persons as give promise of becoming investigators in some department of science.

Among the purely literary societies are the Tabard, Polygon, and Ivy Lane. The Irving Institute, the Zetagathian Society, the Philomathean Society for young men, and the Hesperian Society, the Erodelphian Society and the Octave Thanet Society for young women hold weekly meetings for improvement in debate, oratory, writing, and declamation.

There are also in the institution societies connected with the Engineering, Chemical, Law, and Medical Departments.

MUSICAL ORGANIZATIONS

The University Glee Club, the Minstrels, the Military Band, the Mandolin Club, etc., afford opportunity for musical training and furnish entertainments.

THE LECTURE BUREAU

The Zetagathian and Irving Societies unite to form a lecture bureau which furnishes a series of literary and musical entertainments.

THE ORATORICAL LEAGUE

This association is made up of members of the Zetagathian, Irving, and Philomathean Societies, and is a member of the Northern Oratorical League, consisting of Oberlin College, Northwestern University, and the Universities of Wisconsin, Michigan, Chicago, and Iowa.

THE DEBATING LEAGUE

This organization, composed of the Zetagathian and Irving Societies, carries on systematic training in debating through private practice and public contests. It has had public debates with the Universities of Minnesota and Chicago for some years, and will this year meet the Universities of Minnesota and Wisconsin.

CHRISTIAN ASSOCIATIONS

The Young Men's and Young Women's Christian Associations are the center of the religious life of the University and active factors in all forms of moral and Christian work properly within the scope of such organizations. All students of good moral character are invited to membership either active

or associate. Through the exertions of these associations Close Hall has been erected, mainly from funds contributed by the faculty, students, and alumni of the University and the citizens of Iowa City. It is a spacious and convenient building, containing a large assembly hall, gymnasium, reading rooms, reception rooms, and bath rooms. It is extensively used for the meetings of the associations, as well as for the social, literary, and class gatherings of the students.

Through the generosity of Hon. T. S. Parvin the social room of the Y. W. C. A. has been finely fitted out with furniture, cabinet, and pictures as a memorial to his wife and daughter. A similar room for the Y. M. C. A. has been suitably furnished by Mr. W. D. Cannon, Jr., of Iowa City.

The Associations strive to be useful to all students in every feasible way. Members meet new students at the trains, aid them in securing suitable rooms and boarding places, hold receptions at the opening of the year and on various occasions, maintain an employment bureau, and issue for free distribution a student's handbook containing information of interest and value to the whole student body. The General Secretary is glad to be helpful to students on all occasions.

MEANS OF MORAL AND RELIGIOUS CULTURE

Besides the opportunities offered by the Christian Associations and the positive influence exerted by them, the churches of the city, in which the members of the faculty are a large factor, take a deep interest in the students of the University and heartily welcome them to their public services and to a share in their religious activities and social life. The churches of the city are the Baptist, Christian, Congregational, German and English Lutheran, Methodist Episcopal, Presbyterian, Protestant Episcopal, Roman Catholic, Unitarian, and Church of God.

STUDENTS AND CIVIL AUTHORITIES

The relations of students to all laws and to city ordinances is precisely the same as that of other residents of the city. The University grounds are as completely under the jurisdiction of the civil authorities as any other part of the city.

HOSPITALS

The two hospitals connected with the University afford the best care and treatment for students seriously ill. Provision for free beds for students is commended to the attention of generous friends of the University.

THE DEAN OF WOMEN

Special provision is made for the comfort and welfare of the young women of the University by the appointment of a Dean of Women, who is always ready to help or advise any woman student who may need such assistance. She will recommend boarding and lodging places so far as she is able, see that students who are ill while away from home are put under proper care, assist, as far as possible, young women who wish to earn their way through college, correspond with parents and guardians who desire to make inquiries regarding their daughters or wards, take an interest in the women's organizations and be ready to make such suggestions as may seem to her to be for the good of all.

PHYSICAL TRAINING AND ATHLETICS

The University authorities encourage physical training as acquired in the gymnasium, in military training, and in the exercises and sports in the athletic field, but only in such amount and of such character as is compatible with, and promotive of, the higher objects of the University. Intercollegiate contests are allowed and are held with the leading colleges and universities of the Middle West, but under conditions as to membership, organization of teams, and leave of absence which are determined by the Athletic Board.

The above-named Athletic Board consists of six students, five members of the faculty, and two members from the alumni of the University. The general control and supervision of all athletics are in the hands of this Board.

The University is a member of the "College Conference," comprising the Universities of Chicago, Illinois, Indiana, Iowa, Michigan, Minnesota, and Wisconsin, together with the Northwestern and Purdue Universities. The Athletic Board requires a strict compliance with the "Conference Rules," a copy of

which appears in the Announcement of the College of Liberal Arts.

The athletic field contains about ten acres and is in the immediate vicinity of the University grounds. It affords room for a two-fifths mile running track, a foot ball gridiron, and a base ball diamond entirely separate from one another. During the year over two thousand dollars have been spent in improving this field, and it is the intention to spend as much more during the coming year.

In connection with Close Hall is a small gymnasium, equipped with suitable apparatus, lockers, baths, etc. This is under the direction of competent instructors, and classes are organized both for young men and for young women.

EXPENSES

There are no dormitories and no commons connected with the University. Boarding and lodging in private houses can be obtained for from \$3 to \$5 a week. Clubs are also formed in which the cost of living is from \$1.50 to \$2.50 a week. Room rent varies from 50 cents to \$1.50 a week for each student.

The expense for tuition is as follows :

College of Liberal Arts, \$25 per annum, payable \$10 at the beginning of the first term, \$10 at the beginning of the second term, and the balance at the beginning of the third term. For one or two terms the fee will be \$10 each. Application for reduction of tuition in this College, or for exemption therefrom, may be made to the President, and will be referred to the Executive Committee or to the Board of Regents.

Each candidate for graduation will be required to pay a fee of \$5.

A fee of \$10 is required of all candidates for the Master's degree, for the degree of Civil Engineer, or for the degree of Doctor of Philosophy.

Ample facilities are afforded in the city for instruction in bookkeeping, stenography, and typewriting, in studies preparatory to the University, and in music, by the High School, the Iowa City Commercial College, Miss Irish, the Academy, the Iowa City Conservatory of Music, and by private instructors.

SELF-SUPPORT

The Y. M. C. A. and Y. W. C. A. conduct a free labor bureau, which is at the service of students. Iowa City is a town of 8,000 inhabitants, whose citizens are friendly to the University and take pleasure in affording to deserving students the opportunity to earn their necessary expenses. It rarely happens that a student fails to secure steady employment of some kind, if necessary. Persons wishing to secure work in advance may address the Secretary of the Y. M. C. A.

A GIFT

Major John A. Hull, Arts, '95, has given the University an old Morro gun, known as a Lantaca, probably made in the 18th century. It was captured by the Spanish forces and then brought to the Philippines, and was found in the Meastranza arsenal at the capitulation of Manila.

PRIZES

PICKARD PRIZE—A prize of \$20 was offered last year by Dr. J. L. Pickard for the encouragement of extempore speaking to the student in Political Science who was awarded first rank in competitive extempore debate. A prize of the same value is again offered for this year. The competitive debate will take place early in June.

LOWDEN PRIZE—Frank O. Lowden, Esq., of the class of 1885, offers prizes of the value of \$25 each for excellence in Latin, in Greek, in Botany, and in Geology, and \$50 in Mathematics.

MAYER PRIZE—Mr. Max Mayer of Iowa City has established a prize of the annual value of \$25 for excellence in athletics. The details as to the special matters of competition and the methods of awarding the prize will be publicly announced at the beginning of the year 1900-1901. This prize is open to students of all colleges of the University.

THE LOCAL ALUMNI ASSOCIATION PRIZE—An annual prize of free tuition, \$25, is offered to the freshman from Johnson county who passes the best special examination set for this purpose.

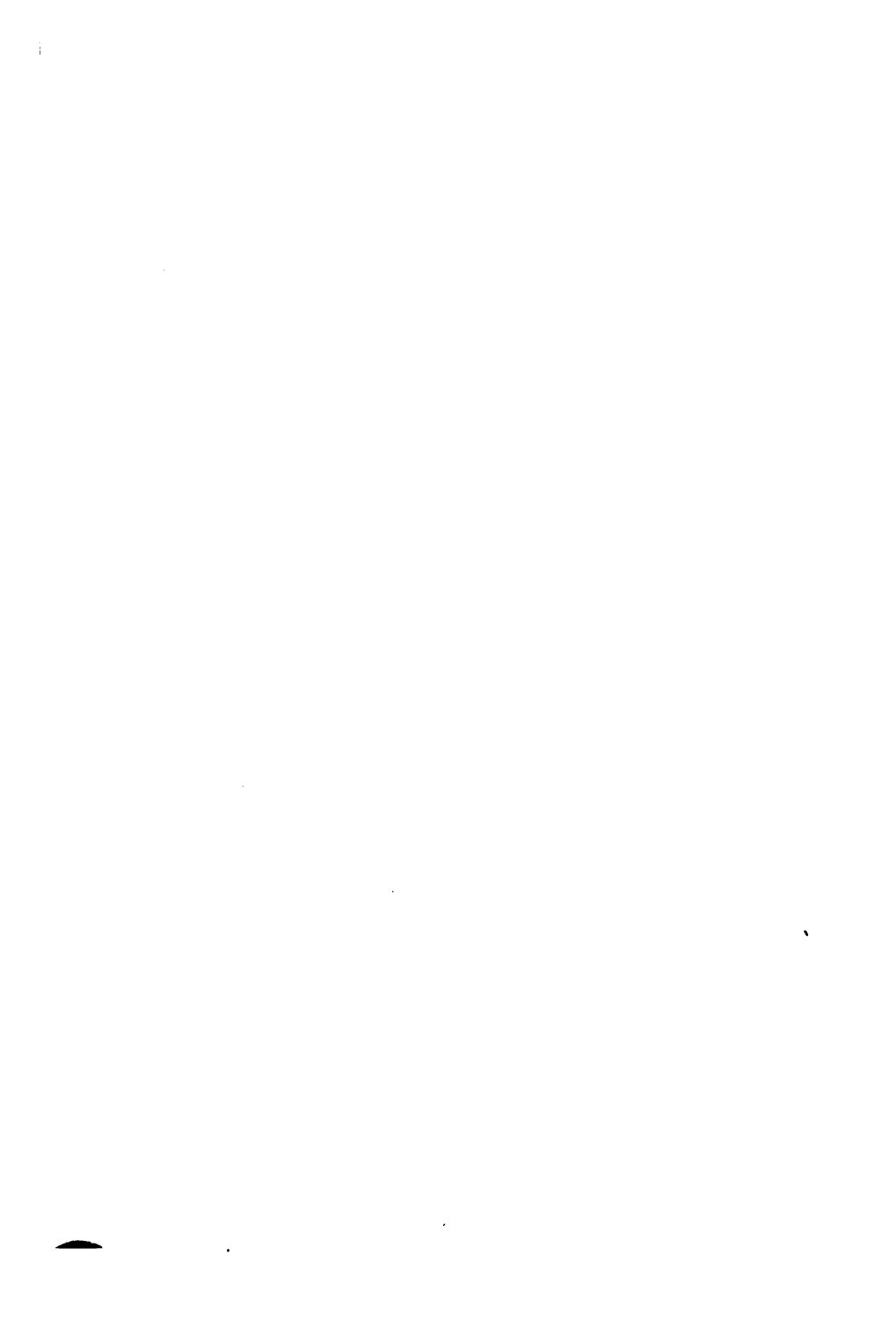
LARRABEE PRIZES—Mrs. William Larrabee offers three prizes of \$25 each for excellence in scholarship, in Botany, in Geology, and in Zoology.

OLD ENGLISH PRIZE—The Early English Text Society of London offers one of its texts as a prize for excellence in Old English.

A citizen of Iowa City offers a copy of Gray's Field Manual for the best work in the Botany of the spring term.

Mr. Lowden has given \$3,000 as an endowment to the Northern Oratorical League. As this University is a member of the League, students are invited to compete and share in the benefits of this endowment.

The College of Liberal Arts



THE MEMBERS OF THE FACULTIES AND OTHER OFFICERS

GEORGE EDWIN MACLEAN, B. A., 1871; M. A., 1874, Williams;
B. D., 1877, Yale; Ph. D., 1883, Leipzig; LL. D., 1895,
Williams.

President, 1899.* 603 College St. (Old Capitol)

AMOS NOYES CURRIER, B. A., 1856; M. A., 1859, Dartmouth;
LL. D., 1893, Des Moines.

Professor of Latin Language and Literature, and Dean of the College
of Liberal Arts, 1867. 32 Bloomington St. (7 Old Capitol)

SAMUEL CALVIN, M. A., 1874, Cornell; Ph. D., 1888, Lenox.

Professor of Geology, 1874. 522 N. Clinton St. (Science Hall, first floor)

THOMAS HUSTON MACBRIDE, B. A., 1869; M. A., 1873, Mon-
mouth; Ph. D., 1895, Lenox.

Professor of Botany, 1878. 728 Washington St. (Science Hall, second floor)

LAUNCELOT WINCHESTER ANDREWS, Ph. B., 1875, Yale;
M. A., Ph. D., 1882, Goettingen.

Professor of Chemistry, 1885. S. Johnson St. (Chemical Laboratory)

GEORGE THOMAS WHITE PATRICK, B. A., 1878, Iowa; B. D.,
1885, Yale; Ph. D., 1888, Johns Hopkins.

Professor of Philosophy, 1887. 704 N. Dubuque St. (Psychological Laboratory)

CHARLES BUNDY WILSON, B. A., 1884; M. A., 1886, Cornell
University.

Professor of German Language and Literature, and Secretary of the
College of Liberal Arts, 1888. 919 E. College St. (6 Old Capitol)

ANDREW ANDERSON VELEN, B. A., 1877; M. A., 1880, Carle-
ton College.

Professor of Physics, 1883. 707 N. Dubuque St. (Physics Bldg.)

LAENAS GIFFORD WELD, B. S., 1883; M. A., 1885, Iowa.

Professor of Mathematics, 1886. 612 N. Dubuque St. (Armory, second floor)

CHARLES CLEVELAND NUTTING, B. A., 1880; M. A., 1882,
Blackburn University.

Professor of Zoology, and Curator of the Museum of Natural History,
1886. 922 E. Washington St. (Science Hall, third floor)

*Date following title indicates year of appointment to service in the
University.

ISAAC ALTHAUS LOOS, B. A., 1876; M. A., 1879, Otterbein;
B. D., 1881, Yale; D. C. L., 1898, Penn Coll.

Professor of Sociology and Political Philosophy, 1899.
22 E. Bloomington St. (4 Old Capitol)

JOSEPH JASPER MCCONNELL, B. A., 1876; B. D., 1878; M. A.,
1880, Iowa.

Professor of Pedagogy, Inspector of High Schools, and Dean of the
Summer Session, 1891. 331 Summit St. (Clinton Street Bldg.)

WILLIAM CRAIG WILCOX, B. A., 1888; M. A., 1891, University
of Rochester.

Professor of History, 1894. 629 N. Dubuque St. (10 South Hall)

FREDERIC C. L. VAN STEENDEREN, M. A., 1893, Penn. Coll.

Professor of French Language and Literature, 1893.
309 Church St. (8 South Hall)

ALFRED VARLEY SIMS, C. E., 1888, Univ. of Pennsylvania.

Professor of Civil Engineering, 1895.
Bloom Terrace. (South Hall, first floor)

*GILBERT LOGAN HOUSER, B. S., 1891; M. S., 1892, Iowa.

Professor of Animal Morphology and Physiology, 1892.
422 Iowa Ave. (Science Hall, first floor)

BENJAMIN FRANKLIN SHAMBAUGH, PH. B., 1892; M. A., 1893,
Iowa; PH. D., 1895, Pennsylvania.

Professor of Political Science, 1895. 104 Market St. (Old Capitol)

CLARK FISHER ANSLEY, B. A., 1890, Nebraska.

Professor of English, 1899. 725 N. Linn St. (6 South Hall)

LEONA ANGELINE CALL, B. A., 1880; M. A., 1883, Iowa.

Professor of Greek Language and Literature, 1885.
21 N. Dubuque St. (Close Hall, second floor)

THE REV. HENRY EVARTS GORDON, B. A., 1879, Amherst.

Professor of Public Speaking, 1900.
113 N. Clinton St. (Old Capitol)

THE REV. ARTHUR FAIRBANKS, B. A., 1886, Dartmouth; PH.
D., 1890, Freiburg, i. B..

Professor of Greek Literature and Archæology, and Secretary of the
Graduate Faculty, 1900. 311 Ronalds St. (Close Hall)

CHARLES SCOTT MAGOWAN, C. E., 1884; M. A., 1887, Iowa.

Assistant Professor of Civil Engineering, 1885.
304 Summit St. (South Hall, first floor)

BOHUMIL SHIMEK, C. E., 1883, Iowa.

Assistant Professor of Botany, and Curator of the Herbarium, 1895.
(Science Hall, second floor)

HENRY FREDERICK WICKHAM, M. S., 1894, Iowa.

Assistant Professor of Zoology, and Assistant Curator of the Museum
of Natural History, 1894. 911 Iowa Ave. (Science Hall, third floor)

ARTHUR G. SMITH, PH. B., 1891; M. A., 1895, Iowa.

Assistant Professor of Mathematics, 1893.
422 N. Dubuque St. (West Bldg., second floor)

*Absent on leave. 1900-1901.

- FRANKLIN HAZEN POTTER, B. A., 1892; M. A., 1895, Colgate.**
Assistant Professor of Latin, 1895. 527 N. Linn St. (7 Old Capitol)
- CARL EMIL SEASHORE, B. A., 1891, Gustavus Adolphus;**
Ph. D., 1895, Yale.
Assistant Professor of Philosophy, 1897.
208 Fairchild St. (Psychological Lab.)
- ALICE YOUNG, B. L., 1896, Minnesota.**
Assistant Professor of English, and Dean of Women, 1900.
111 N. Clinton St. (7 and 12 South Hall)
- FREDERIC E. BOLTON, B. S., 1893; M. S., 1896, Wisconsin;**
Ph. D., 1898, Clark.
Assistant Professor of Pedagogy, 1900.
122 Court St. (Clinton Street Bldg.)
- ALDEN ARTHUR KNIPE, M. D., 1896, Pennsylvania.**
Professor and Director of Physical Culture, 1900.
- LUTHER ALBERTUS BREWER, B. A., 1883; M. A., 1886, Pennsylvania College.**
Lecturer on Journalism, 1900. University Publisher. Cedar Rapids. Ia
- FREDERIC BERNARD STURM, B. A., 1892, Michigan.**
Instructor in German, 1892. 422 Iowa Avenue. (5 South Hall)
- HERBERT C. DORCAS, Ph. B., 1895, Iowa.**
Instructor in Pedagogy, and University Examiner, 1895.
427 Ronalds St. (Psychological Laboratory, second floor)
- LOUISE ELIZABETH HUGHES, Ph. B., 1878; M. A., 1881; B. A., 1899, Iowa.**
Instructor in Latin, 1896. 122 N. Capitol St. (Close Hall)
- WILLIAM ROLLA PATTERSON, B. D., 1888; B. S., 1889, Iowa State Normal; Ph. B., 1895, Iowa; Ph. D., 1898, Pennsylvania.**
Instructor in Statistics and Economics, 1898.
505 Washington St. (4 Old Capitol)
- CLARENCE WILLIS EASTMAN, B. S., 1894, Worcester Polytechnic; M. A., Ph. D., 1898, Leipzig.**
Instructor in German, 1898. 430 N. Clinton St. (Close Hall)
- CARL LEOPOLD VON ENDE, B. S., 1893; M. S., 1894, Iowa; Ph. D., 1899, Goettingen.**
Instructor in Chemistry, 1899. 220 S. Johnson St. (Chem. Lab.)
- JOHN VAN ETEN WESTFALL, B. S., 1895, Cornell University; Ph. D., 1898, Leipzig.**
Instructor in Mathematics, 1899. 218 S. Linn St. (Armory)
- GEORGE T. FLOM, B. L., 1893, Wisconsin; M. A., 1894, Vanderbilt; Ph. D., 1899, Columbia.**
Instructor in Charge of Scandinavian Languages and Literatures, 1900.
618 N. Dubuque St. (6 Old Capitol)

JOHN DAVIS BATCHELDER, B. A., 1894, Vermont; LL. B., 1895, Minnesota.

Instructor in French, 1900. St. James Hotel. (Close Hall)

RUSSELL D. GEORGE, M. A., 1898, McMaster University, Toronto.

Instructor in Geology, 1900. 704 N. Dubuque St. (Science Hall)

SIVERT N. HAGEN, B. A., 1896, Luther College; PH. D., 1900, Johns Hopkins.

Instructor in English, 1900. 714 N. Linn St. (South Hall)

CHARLES F. LORENZ, B. S., 1897; M. S., 1898, Iowa.

Instructor in Physics, 1900. 215 Ronalds St. (Physics Lab.)

HARRY GRANT PLUM, B. PH., 1894; M. A., 1896, Iowa.

Instructor in History, 1900. 419 N. Dubuque St. (South Hall)

FRANCIS NEWTON BRINK, B. PH., 1899, Iowa.

Assistant Instructor in Chemistry, 1898.
222 N. Dubuque St. (Chemical Laboratory)

*AUGUST VON ENDE, B. S., 1897, Iowa.

Assistant Instructor in Mathematics, 1899.
220 S. Johnson St. (Armory)

JOHN J. LAMBERT, B. Di., 1896; M. Di., 1897, Iowa State Normal; B. PH., 1899, Iowa.

Assistant Instructor in Animal Morphology and Physiology, 1898.
119 N. Capitol St. (Science Hall)

SAM BERKELEY SLOAN, B. A., 1899, Nebraska.

Assistant Instructor in English, 1900. 230 Fairchild St. (South Hall)

CLYDE B. COOPER, B. A., 1897, Nebraska.

Assistant Instructor in English, 1900. 15 Harrison St. (South Hall)

GAYLORD D. WEEKS,

Assistant Instructor in Civil Engineering, 1900.
304 Summit St. (South Hall)

H. HEATH BAWDEN, B. A., 1893, Denison University; PH. D., 1900, Chicago.

Teaching Fellow in Philosophy, 1900. Gilbert St. (Clinton St. Bldg.)

GEORGE LUTHER CADY, B. A., Olivet College.

Honorary Fellow in Sociology, 1900. Dubuque St.

SIMEON E. THOMAS, B. S., Upper Iowa Univ.; M. A., Iowa.

Fellow in Political Science, 1900. 1014 E. College St. (Old Capitol)

J. E. CONNER, B. A., 1891, Iowa.

Fellow in Economics and Sociology, 1900.
419 N. Dubuque St. (Old Capitol)

*Resigned January 1, 1901.

- KATHERINE PAINE, B. PH., 1899, Iowa.**
Fellow in Latin, 1900. 513 Summit St. (Old Capitol)
- MABEL C. WILLIAMS, B. PH., 1899, Iowa.**
Fellow in Philosophy, 1900. (Clinton St. Bldg.)
-
- LEE P. SIEG, B. S., 1900, Iowa.**
Scholar in Physics, 1900. 211 E. Davenport St. (Physics Lab.)
- PERCIVAL HUNT, B. A., 1900, Iowa.**
Scholar in English, 1900. 329 N. Dubuque St.
- ELEANOR E. HATCH, B. A., 1898, Iowa.**
Scholar in English, 1900. 222 Fairchild St.
- FRANK A. STROMSTEN, B. S., 1900, Iowa.**
Scholar in Morphology, 1900. 1017 College St.
- S. T. TAMURA, B. S., 1900, Simpson College.**
Scholar in Mathematics, 1900. 17 S. Madison St.
- WILLIAM E. BECK, B. S., 1900, Iowa.**
Scholar in Mathematics, 1900. 518 S. Clinton St.
- DAVID JONES, B. A., 1900, Penn College.**
Scholar in History, 1900. 307 S. Capitol St.
-
- BERTHA C. WILLIAMS, B. PH., 1888, Iowa.**
Assistant in French, 1900. 331 S. Dubuque St.
- JAMES ELLIS GOW,**
Undergraduate Assistant in Botany, 1900. 122 N. Capitol St.
- C. I. LAMBERT,**
Undergraduate Assistant in Botany, 1900.
- W. M. BOEHM,**
Undergraduate Assistant in Astronomy, 1900.
- JOHN CARVILLE,**
Assistant in Geology.
-
- RUDOLPH M. ANDERSON,**
Taxidermist.

STANDING COMMITTEES OF THE FACULTY OF
THE COLLEGE OF LIBERAL ARTS

ADMISSION AND CLASSIFICATION: Professors Wilson, McConnell, Patrick, Currier, Macbride.

COURSES OF STUDY AND PROGRAMME: Professors Currier, Macbride, Andrews, Patrick, Weld, Loos, McConnell, Sims, Ansley.

EXECUTIVE: The President, Professors Currier, Macbride.

MILITARY: Professors Andrews, Shambaugh, Wilcox, Gordon,

PREPARATORY SCHOOLS: Professors McConnell, Calvin, Weld, Fairbanks.

LIBRARY: The President, Professors Nutting, Loos, Andrews, McConnell.

RULES: Professors Veblen, van Steenderen, Sims.

SUMMER SESSION: Professors McConnell, Andrews, Loos, Nutting, Ansley, Call.

GENERAL PLAN.

The College of Liberal Arts offers four general courses of study—one Classical, two Philosophical, and one General Scientific—and two technical courses—Civil Engineering and Electrical Engineering. The requirements and lines of work offered are set forth under Courses of Study.

REQUIREMENTS FOR ADMISSION

Applicants for admission to the freshman class in any of the courses of the College of Liberal Arts must be at least sixteen years of age, and must present satisfactory evidence of having completed the preparatory studies specified below. An examination is required of all students who do not present acceptable certificates.

It is expected that the following branches of study will be completed in the grammar school: Practical Arithmetic, Reading, Penmanship, Elementary English Grammar, Geography, Bookkeeping (single entry), Physiology (the statutory requirements for primary and grammar schools), United States History (three terms' work), Civil Government (one term's work), Composition (three terms' work), Drawing (three terms' work). The work in Bookkeeping, Composition, Drawing, and Civil Government is not required, but only work in excess of the amount stated in this paragraph will receive credit as preparatory work.

In estimating the amount of work required for admission, a *preparatory credit* is regarded as the equivalent of one study daily for a term of twelve weeks on the basis of three studies a day. Thus nine credits stand for a normal year's work.

For admission to the University thirty-six preparatory credits are required.¹ No student will be admitted whose deficiencies exceed the amount represented by four credits. Candidates having deficiencies not exceeding this limit may be admitted upon condition that they complete their preparatory work within the first year after admission.

Of the thirty-six preparatory credits required of all students eighteen are the same for all courses, and eighteen differ with the course of study to be pursued. The requirements common to all courses are as follows :

Mathematics	9 credits;
English	5 credits;
History	4 credits.

¹ Beginning with the class entering in September, 1902, the University will define a preparatory credit as the equivalent of one study daily for a term of twelve weeks on the basis of *four* studies a day, and *forty-two* credits will be required for admission. Eleven credits instead of five will then be required in English.

The requirements which differ with the course of study to be pursued are as follows :

CLASSICAL COURSE

Latin..... 12 credits;
Greek, or elective¹..... 6 credits;

PHILOSOPHICAL A COURSE

Latin..... 12 credits;
Elective..... 6 credits;

OTHER COURSES

Foreign language²..... 6 credits;
Elective 12 credits.

The electives presented for admission may consist of additional work in foreign languages to complete the entire eighteen credits, or of additional work of approved character in English, or in History, or of work in Science as outlined under Group V below. Candidates are advised to present additional work in a foreign language, English, or History rather than to present the maximum of twelve terms' work in Science. When additional work in Latin or modern languages is presented as an elective, it is provided that not less than two years be given to some one language, and not less than one year to each additional language that may be offered.

THE SUBJECTS REQUIRED FOR ADMISSION

GROUP I—ANCIENT LANGUAGES

1. GREEK—Grammar, Xenophon's *Anabasis* (four books), Homer's *Iliad* (three books).

The preparatory work in Greek should give thorough knowledge of grammatical forms, familiarity with the common rules of syntax, and a considerable working vocabulary. White's *First Greek Book* and Goodwin's *Greek Grammar* are the books recommended for beginners. Exercise in writing Greek should be kept up through the whole preparatory course

NOTE 1: At present six credits from the elective group are accepted as an equivalent instead of six credits in Greek, and Greek may be begun as a college study.

NOTE 2: The requirement in foreign language for the Philosophical B, Scientific, and Engineering Courses may be satisfied by two years in Latin, or in German, or in French, but not by a single year in each of two languages.

in order to fix the student's knowledge of vocabulary as well as of grammar, and to place it completely at his command. The work in Homer should give familiarity with peculiar Homeric forms, the commoner words in the Homeric vocabulary, and the metre of the epic.

For the present the University offers a course in beginning Greek, and students coming from high schools where Greek is not taught may offer six preparatory credits from the elective group instead of six credits in Greek. Such students will receive college credit for work in beginning Greek.

2. LATIN—Grammar, Cæsar (four books), Cicero (six orations), Vergil (six books), with Prosody.

Instead of the prescribed Cæsar an equivalent amount of *Viri Romæ* or Nepos will be accepted and is recommended to the preparatory schools. In this case the remainder of the requirements may be offered in Cæsar or Cicero. It is expected that three or four of the six required orations of Cicero (the Catiline orations being taken as the standard of length) will be read thoroughly and the remainder rapidly with a view of securing facility in translation. Equivalents in kind will be accepted for any part of the specific requirements. *An accurate and ready knowledge of grammatical forms and construction and a good vocabulary are of essential importance.* Sight reading should be taught and practiced from the first.

Exercise in writing Latin, based upon the current reading, ought to be carried through the *entire preparatory course*. An amount equivalent to Collar, Part III, is required for admission.

Four years of daily recitation are needed for the required preparation. The Roman pronunciation is used in the University.

GROUP II—MODERN LANGUAGES

3. FRENCH—Grandgent's *Essentials of French Grammar* or Edgren's *French Grammar*, and Super's *Reader*, with Merimee's *Colomba*, will be accepted as an equivalent of the first year's work in French.

Alfred de Vigny's *Le cachet rouge*, Victor Hugo's *La chute*, Alexandre Dumas' *Les trois mousquetaires*, Lamartine's *Grasiella*, Well's Selections from Balzac's *Comedie humaine* and either Alphonse Daudet's *Nabob*, or Cameron's *Contes de Daudet* will be accepted as an equivalent of the second year's work in French.

4. GERMAN—During the first year the work in German should comprise : (1) Careful drill upon pronunciation; (2) the memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar, that is, upon the inflections of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more usual strong verbs, also upon the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (5) the reading of from seventy-five to one hundred pages of graduated texts.

During the second year the work should comprise : (1) The reading of about one hundred and fifty pages of literature in the form of easy stories and plays; (2) accompanying practice in the translation into German of easy variations upon the matter read; (3) continued drill upon the rudiments of the grammar.

For a fuller statement of the work to be done and for suggestions as to methods and available texts, the teacher is referred to Section VII of the *Report of the Committee of Twelve of the Modern Language Association of America*, which has been issued in a convenient form by Messrs. D. C. Heath & Co. This report should be in the hands of every teacher of modern languages.

GROUP III—ENGLISH AND HISTORY

NOTE—Of the class entering the University in September, 1901, only five credits are required in English, and these credits will represent work in Composition and in Literature as outlined under "b" and "c." Beginning with September, 1902, eleven credits will be required in English. The work specified below is in accordance with this full requirement. The statement concerning the entrance examination in English Grammar and Composition applies to 1901 as well as to subsequent years.

An outline of an acceptable course of study for lower grades and high schools has been prepared by members of the department of English and will be sent to any address upon application to Professor Ansley.

5. ENGLISH—All applicants for admission, whether from accredited schools or not, will be examined to test their knowledge of English grammar and their ability to write clearly and correctly. No applicant will be accepted who is deficient in

these matters. In addition to passing this examination, the applicant must present evidence of work as follows:

- a. English Grammar, Word Study, and History of the English Language--3 credits.

At least one and one-half credits must be in English grammar. This must be a course in grammar taken in the high school or other secondary school. Eighth grade grammar will not be accepted, as pupils in that grade have not sufficient maturity of mind for a final study of the subject. Text-books suggested are: Whitney's *Essentials of English Grammar* (Ginn & Co.); Davenport and Emerson's *Principles of Grammar* (The Macmillan Co.); Buehler's *Modern English Grammar* (Newson & Co., N. Y.).

The study of words should be based upon some such book as *A Study of English Words*, by Jessie M. Anderson (American Book Co.).

- b. Composition and Rhetoric-----3 credits.

Proper preparation for this requirement includes constant practice in writing, with careful correction and revision of themes. A part of the time should be devoted to the study of some good text-book, as Herrick and Damon's *Composition and Rhetoric* (Scott, Foresman & Co.); Keeler and Davis's *Studies in English Composition* (Allyn & Bacon); or Scott and Denney's *Composition-Rhetoric* (Allyn & Bacon).

- c. Literature -----5 credits.

Throughout the high school course much attention should be paid to English and American literature. Entire masterpieces suited to the attainments of the class should be carefully studied. In addition, collateral reading should be assigned and written reports required. Among the masterpieces included should be the "uniform college entrance requirements" in English. For 1901 and 1902 these are as follows:

- (1) For careful study:

Burke's Speech on *Conciliation with America*; Macaulay's Essays on *Milton* and *Addison*; Milton's Minor Poems; Shakespeare's *Macbeth*.

- (2) For general reading:

Addison's *Sir Roger de Coverley Papers*; Coleridge's *The Ancient Mariner*; Cooper's *The Last of the Mohicans*; Eliot's *Silas Marner*; Goldsmith's *The Vicar of Wakefield*; Lowell's *The Vision of Sir Launfal*; Pope's *Iliad*, Books I, VI, XXII,

and XXIV; Scott's *Ivanhoe*; Shakespeare's *The Merchant of Venice*; Tennyson's *The Princess*.

During the last year of the course a good outline history of the literature, such as Pancoast's *Introduction to English Literature* (Henry Holt & Co.), or Halleck's *History of English Literature* (American Book Co.), should be carefully studied.

6. HISTORY—At least four terms' work should be presented in History. The course of study and available text-books should be somewhat as follows: First and second terms, *History of Greece* (Oman, Smith, Cox, or Myers) and *Rome* (Allen, Morey, Smith, or Myers); third term, *History of England* (Montgomery or Gardiner); fourth term, *The History of the United States* (Channing, Thomas, Fiske, Johnston, Montgomery, McMaster, or McLaughlin) or *Civil Government* (Fiske's *Civil Government* or Andrews's *Manual of the Constitution*).

Instead of the first three terms' work in History indicated above, which is preferred, the University will accept for the present three terms' work in general history from one of the following text-books: Myers, Fisher, Freeman, or Colby.

7. ECONOMICS—(a) A half year's work on the Principles of Political Economy as presented in the following text-books will be accepted: Laurence Laughlin's *Elements of Political Economy* (American Book Co.); Francis A. Walker's *First Lessons in Political Economy* (Henry Holt & Co.); or (b) Industrial History and the Elements of Economic Theory studied on the basis of an outline like Henry W. Thurston's *Economics and Industrial History for Secondary Schools* (Scott, Foresman, & Co.).

GROUP IV—MATHEMATICS

8. ALGEBRA—The Algebra of the high school should comprise a careful study of the following topics: signs and symbols; fundamental operations; factoring (including lowest common multiple and highest common divisor); fractions; simple and quadratic equations; theory of exponents (including negative and fractional exponents and radicals); progressions. Especial attention should be given to such salient points as the significance of the minus sign, factoring, theory of exponents, equations, and the formal statement of algebraic problems. The interpretation of algebraic results with their graphical representation should be introduced at the earliest possible stage and constantly insisted upon.

Four and a half credits, representing at least one and a half year's work of daily recitation, are required in Algebra.

9. GEOMETRY—Both Plane and Solid Geometry are required. In beginning the study of Geometry the "heuristic" method is recommended (see Hopkins's *Manual of Plane Geometry*, D. C. Heath & Co.; Spencer's *Inventional Geometry*, D. Appleton & Co.; Campbell's *Observational Geometry*, Harper & Brothers).

Whatever method is used, the pupil should be provided with adequate drawing instruments and should construct and verify all of his propositions and theorems. Geometric processes and results should be expressed by algebraic symbols whenever possible. Original investigations should not simply be encouraged, but should be insisted upon as a matter of course. The eminently practical side of the study of Geometry is not to be lost sight of, but the work should be so arranged that it may be of the highest disciplinary value. The language of all geometrical exercises should be exact.

Four and a half credits, representing at least one and a half year's work of daily recitation, are required in Geometry; at least one term should be devoted to Solid Geometry.

10. ARITHMETIC—The work in Arithmetic should in general be completed in the grammar grades. A half year's work in Arithmetic may be done with great profit in the high school after the completion of the required work in Algebra and Geometry. Not only will a general review of the subject be found beneficial in itself, but the higher point of view now attainable may be taken advantage of in many ways.

In addition to the nine credits in Algebra and Geometry, one and a half credits for advanced work in Arithmetic, and one and a half credits for work in Bookkeeping (by double entry) will be accepted as part of the six (or twelve) elective credits.

It is desirable that the high school work in Mathematics be not finished until the end of the course, in order that there may be no break in the continuity of the work between the high school and the University.

GROUP V—SCIENCE

Work in the sciences named below will be accepted in partial fulfillment of the requirements for admission, provided that the student has given to each subject offered not less than the

time indicated in the table below. The subjects are arranged in order of preference.

1. Physics, 1 year;
2. Botany, $\frac{1}{2}$ year;
3. Physical Geography, $\frac{1}{2}$ year;
4. Physiology, $\frac{1}{2}$ year;
5. Chemistry, $1\frac{1}{2}$ year;
6. Zoology, $\frac{1}{2}$ year.

11. PHYSICS—One of the chief aims of the course in Physics should be to train the pupil in accurate and impartial observation, and to develop independent judgment rather than to impart knowledge of a large number of facts. Constant use should be made of problems in which the pupil may apply the mathematics he has already mastered.

The competent teacher will know how to make valuable use of simple apparatus, such as can be made or procured at home but the subject cannot be satisfactorily presented without some special instruments, and these should be of modern design and good workmanship. In all schools there should be a supply of such appliances as will enable the teacher to present to the class in a successful manner the more interesting demonstrations of phenomena and laws.

Among the good text-books and manuals are: Carhart and Chute's *Elements of Physics* (Allyn & Bacon); Geo. A. Hoadley's *A Brief Course in Physics* (American Book Co.); Charles B. Thwing's *An Elementary Physics* (Benj. H. Sanborn & Co.); Rowland and Ames's *Elements of Physics* (American Book Co.).

One full year should be given to the study of Physics. Of this time not less than one-half should be devoted to experiments and observations by the pupil.

12. BOTANY—The aim should be to make pupils familiar with the local flora, especially in its economic aspects. The habit of carefully observing and then carefully recording should be established from the first. Probably a carefully kept note book will be found much better than an herbarium.

The following text-books are suggested as suitable for the guidance of study in elementary Botany: Macbride's *Lessons in Elementary Botany* (Allyn & Bacon); Coulter's *Plant Relations* (D. Appleton & Co.); Barnes's *Outlines of Plant Life* (Henry Holt & Co.); Bailey's *Lessons with Plants* (The Macmillan Co.).

The minimum amount of work for which preparatory credit will be given is the equivalent of five recitations or exercises per week for half the school year.

13. PHYSICAL GEOGRAPHY—The pupil should gain a knowledge of the simpler facts and principles of mathematical geography, such as the relations of the members of the solar system, the form and movements of the earth, the phases of the moon, etc.; the atmosphere, atmospheric phenomena, such as winds, temperature, precipitation, etc., and their causes; the evolution of land forms, including the modifying agencies and their mode of operation; the effect of climate and topography on human activity, etc.

The following text-books are recommended: *Physical Geography*, by W. M. Davis (Ginn & Co.); *Elementary Lessons in Physical Geography*, by A. Geikie (The Macmillan Co.); *Elementary Physical Geography*, by R. S. Tarr (The Macmillan Co.). The *Topographic Atlas of the United States, Physiographic Types*, Folios I, II, and III, published by the United States Geological Survey, at twenty-five cents each, are very valuable for class exercises. The following books are excellent for reference: *The Teaching of Geography*, by A. Geikie (The Macmillan Co.); *The Realm of Nature*, by R. H. Mill (Chas. Scribner's Sons); *Earth Sculpture*, by Jas. Geikie (G. P. Putnam's Sons); *Geography of the Region About Devil's Lake and the Dells of the Wisconsin*, by R. D. Salisbury and W. W. Atwood, published by the Wisconsin Geological Survey, E. A. Birge, Director, Madison, Wis.; the local county reports published by the Iowa Geological Survey; *Government Maps for Use in Schools*, by Davis, King, and Collie (Henry Holt & Co.). The local field should be used for illustration as far as possible. The county reports will furnish valuable aid in field work.

The minimum amount of work for which preparatory credit will be given is the equivalent of five recitations or exercises per week for half the school year.

14. PHYSIOLOGY—The following text-books are recommended as indicating the character and extent of acceptable preparatory work in Physiology: Foster and Shore's *Physiology for Beginners* (The Macmillan Co.); Blaisdell's *Practical Physiology* (Ginn & Co.); Martin's *Human Body* (Briefer Course), revised by Fitz (Henry Holt & Co.); Colton's *Practical Physiology* (American Book Co.). These texts should be supplemented by such reference books as Stewart's *Practical Physiology*, with *Practical Exercise* (W. B. Saunders, Philadelphia); Sterling's *Practical Physiology* (P. Blakiston's Sons & Co., Philadelphia); Yeo's *Manual of Physiology* (P. Blakiston's

Sons & Co.), and Kirke's *Handbook of Physiology* (Wm. Wood & Co., N. Y.).

The minimum amount of work for which preparatory credit will be given is the equivalent of five recitations or exercises per week for half the school year.

15. CHEMISTRY—Emphasize facts rather than theories. Great care should be taken that pupils are not left with the impression that formulas or equations control the phenomena instead of being merely their expression. Laboratory work is regarded as essential to an understanding of the subject. The experiments should be simple, and the inferences from them as direct as possible. Any arrangement in schedule form, with headings for "observations," "conclusions" and the like, tends to deaden thought rather than to arouse it. No credit will be given for work in this branch in schools where there is no laboratory whatever. *Elements of Chemistry*, by Paul C. Freer (Allyn & Bacon); *Elements of Chemistry*, by Ira Remsen (Henry Holt & Co.); and *Elements of Inorganic Chemistry*, by J. H. Shepard (D. C. Heath & Co.), are recommended as suitable text-books for use in secondary schools.

The minimum time to be devoted to Chemistry in order to receive credit should be one-half year of daily laboratory work.

16. ZOOLOGY—Elementary Zoology should deal principally with the easily ascertained facts concerning some few animal forms. It is therefore recommended that the general anatomy and life histories of some typical groups of animals be made the subject of the study, and that the aim be the acquisition of the habit of correct observation and a definite knowledge concerning a few animals, rather than the learning of classifications and a superficial knowledge of the animal kingdom as a whole.

Directions for laboratory work are found in most text-books. Money for this purpose should be expended in plain but convenient tables, good dissecting microscopes, and a few cheap tools, rather than in expensive compound microscopes.

Pupils should be induced to examine carefully, and to make the most of each specimen. They should be encouraged to ask questions, and to find the answer for themselves so far as practicable.

The following text-books indicate the character and extent of the preparatory work in Zoology which will be accepted: *Practical Zoology*, Colton (D. C. Heath & Co.); *School Zoology*,

Burnet (American Book Co.); *Lessons in Zoology*, Needham (American Book Co.); *Animal Life*, Jordan (D. Appleton & Co.).

The minimum time to be devoted to Zoology in order to receive credit for admission to the University should be one hour's laboratory work daily for a half year. This should be supplemented by field work and reading under the direction of the teacher.

GENERAL OBSERVATIONS

1. It is strongly advised that preparatory work be confined to few subjects and that they be so chosen that they form two or three groups of closely related subjects.

2. It is assumed that, under ordinary circumstances, four years in the high school will be devoted to meet the requirements for admission here prescribed.

3. Students who are admitted with conditions can make them up in the Iowa City Academy, or under the direction of private tutors approved by the Faculty.

EXAMINATION FOR ADMISSION

All applicants for admission without exception will be examined to test their knowledge of English Grammar and their ability to write clear and correct English.

Applicants presenting proper certificates from accredited schools will be admitted without farther examination. These certificates are to be made out on blank forms which will be furnished on application to the President of the University, and they must contain specific statements as to the amount of work done in each study. Delay in matriculation will be avoided if these certificates are made out and forwarded to the University before September 1.

At other high schools and in places where academics or other private schools are situated, the University is prepared to hold examinations during the third week in June. The successful candidates will receive certificates admitting them to the University.

Applicants presenting certificates from accredited schools for work not fully meeting the requirements for admission, will

be examined on the subjects in which they are deficient.

If an applicant for admission by certificate has completed the prescribed amount of preparatory work in certain branches of study in less time than that indicated as being necessary under ordinary conditions, the University reserves the right to examine him in such branches of study.

All other applicants will be examined in the various subjects required for admission before being admitted as students in the University.

ADVANCED STANDING

Students from approved colleges bringing proper certificates of work and standing will be admitted without examination. In determining their position in the University, however, the value of the work done will be measured by the University standards.

Students coming from colleges whose requirements for admission are substantially those of the University will be admitted ordinarily to equal rank, provided they enter not later than the beginning of the senior year. In every instance at least one year's work in residence must be completed in the College of Liberal Arts of the University. The assignment of studies will be at the discretion of the faculty.

Graduates of the four years' course of the Iowa State Normal School will be admitted to junior standing without examination and will be required to spend two years at the University before receiving a degree. Graduates of the three years' course will be admitted to sophomore standing and will be required to spend three years in residence before receiving a degree. The requirement that all applicants for admission to the University must bring certificates showing that they have completed two years' work in some one foreign language applies also to applicants for advanced standing.

PROGRAMME OF ENTRANCE EXAMINATION.

MONDAY, SEPTEMBER 16, TO WEDNESDAY, SEPTEMBER 18, 1901

Greek,	3 to 6 credits, Monday,	1:30 p. m.
French,	3 to 6 credits,	
	(or more) Monday,	1:30 p. m.
Latin,	3 to 12 credits, Monday,	3:30 p. m.
German,	3 to 6 credits,	
	(or more) Monday,	3:30 p. m.

N. B.—Applicants who by examination secure 12 credits in foreign language will be excused from examination in science.

Algebra,	4½ credits, Tuesday,	8:00 a. m.
Plane and Solid Geometry,	4½ credits, Tuesday,	10:00 a. m.
General History,	3 credits, Tuesday,	1:00 p. m.
English History <i>or</i> American History,	1½ credits, Tuesday,	2:30 p. m.
Civics <i>or</i> Economics,	1½ credits, Tuesday,	3:30 p. m.

N. B.—Applicants may choose General History *and* either English History or American History; *or* Civics or Economics.

English and English Grammar,	3 credits, Tuesday,	4:30 p. m.
Literature,	3 credits, Wednesday,	8:00 a. m.
Physics,	3 credits, Wednesday,	9:30 a. m.
Botany,	1½ credits, Wednesday,	11:00 a. m.
Physical Geography,	1½ credits, Wednesday,	1:30 p. m.
Physiology,	1½ credits, Wednesday,	2:30 p. m.

N. B.—Applicants may choose either:

a. Physics *and* either Botany, Physical Geography, or Physiology; or

b. Botany, Physical Geography, and Physiology.

Beginning at 8 o'clock a. m., Wednesday, September 18, after the entrance examination in English and English Grammar, applicants who have passed the necessary examinations will be assigned to classes, pay their tuition, and be registered.

ENTRANCE EXAMINATIONS FOR THE WINTER TERM, 1902.

Persons subject to entrance examinations who expect to enter the College of Liberal Arts in January, 1902, must present themselves at the office of the University Examiner at 8 o'clock a. m., Thursday, January 2.

COURSES OF STUDY

CLASSICAL COURSE

FRESHMAN YEAR

	FALL Hours a Week	WINTER Hours a Week	SPRING Hours a Week
Greek.....	5	5	5
Latin.....	4	4	4
English.....	2	2	2
Mathematics.....	5	5	5
or			
Mathematics.....	3	3	3
and			
Ancient History.....	2	2	2
Military Drill.....	3	1	3

SOPHOMORE YEAR

French or German..	5	5	5
English.....	2	2	2
Elective.....	8	8	8
Military Drill.....	3	1	3

JUNIOR YEAR

Elective.....	15	15	15
Military Drill.....	3	1	3

SENIOR YEAR

Elective.....	15	15	15
Military Drill.....	3	1	3

CONDITION—Three terms of material science must be taken in this course.

PHILOSOPHICAL COURSE A

FRESHMAN YEAR

	FALL Hours a Week	WINTER Hours a Week	SPRING Hours a Week
German or French..	5	5	5
Latin.....	4	4	4
English.....	2	2	2
Mathematics.....	5	5	5
or			
Mathematics.....	3	3	3
and			
Ancient History.....	2	2	2
Military Drill.....	3	1	3

SOPHOMORE YEAR

French or German..	3	.....	3	.....	3
Latin, German, or					
French.....	5	.....	5	.....	5
English.....	2	.....	2	.....	2
Elective.....	5	.....	5	.....	5
Military Drill.....	3	.....	1	.....	3

JUNIOR YEAR

Philosophy.....	2 or 3	.....	2 or 3	.....	2 or 3
Elective.....	12 or 13	.....	12 or 13	.....	12 or 13
Military Drill.....	3	.....	1	.....	3

SENIOR YEAR

Elective.....	15	.....	15	.....	15
Military Drill.....	3	.....	1	.....	3

CONDITION—Three terms of material science must be taken in this course.

PHILOSOPHICAL COURSE B

FRESHMAN YEAR

	FALL	WINTER	SPRING
	Hours a Week	Hours a Week	Hours a Week
German.....	5	.....	5
Latin or French.....	5	.....	5
English.....	2	.....	2
Mathematics.....	5	.....	5
or			
Mathematics.....	3	.....	3
and			
Ancient History.....	2	.....	2
Military Drill.....	3	.....	1

SOPHOMORE YEAR

German.....	3	.....	3
English.....	2	.....	2
Elective.....	5	.....	5
Military Drill.....	3	.....	1

JUNIOR YEAR

Elective.....	15	.....	15
Military Drill.....	3	.....	1

SENIOR YEAR

Elective.....	15	.....	15
Military Drill.....	3	.....	1

CONDITION—Three terms of material science must be taken in this course. In the junior and senior years a *major*, the equivalent of not less than three hours extending through two years, and a kindred *minor* of not less than three hours extending through one year, must be taken. Each student may select his own major, but in the selection of his minor he must seek the advice of the professor in charge of the major, or of a committee of the faculty. *Students entering this course on the terms prescribed for admission to the Scientific Course, but without the full Latin requirements for entrance to Philosophical Course A, must complete them after entrance, and the University will temporarily provide for instruction in Cicero's Orations, and Vergil.* This provision is made in the interest of considerable numbers of high school graduates whose course has not furnished the opportunity for fulfilling these requirements.

GENERAL SCIENTIFIC COURSE

FRESHMAN YEAR

	FALL Hours a Week	WINTER Hours a Week	SPRING Hours a Week
German or French	5	5	5
Mathematics	5	5	5
English	2	2	2
Drawing	3	3	3
Military Drill	3	1	3

SOPHOMORE YEAR

German or French	5 or 3	5 or 3	5 or 3
English	2	2	2
Physics	5	5	5
Botany, Zoology, Morphology, Geology, Chemistry, Mathematics, or Astronomy	5	5	5
Military Drill	3	1	3

JUNIOR YEAR

German or French	3 or 5	3 or 5	3 or 5
Chemistry	5	5	5
Botany, Zoology, Morphology, or Geology	5	5	5
Elective	3 or 5	3 or 5	3 or 5
Military Drill	3	1	3

SENIOR YEAR

Elective.....	15	.....	15	.....	15
Military Drill.....	3	.....	1	.....	3

No substitution whatever is allowed for any of the required work of the Scientific Course, except that, in place of the full requirement in either one of the modern languages, there may be offered an equivalent amount of Latin of *collegiate grade*.

SPECIAL COURSES IN SCIENCE

The student who wishes, in his undergraduate course, to specialize in some particular line of scientific study, should at the beginning of the sophomore year choose from the group of sciences then open to him (Botany, Zoology, Morphology, Geology, Chemistry, Physics, Mathematics, and Astronomy), that subject most directly connected with the branch to which he wishes to give special attention. He will thus be able to pursue his chosen study without interruption through three years of his course, the last of which may, if he so choose, be devoted entirely to his specialty.

Such extreme specialization is not recommended to undergraduate students, it being the opinion of the Faculty of the College of Liberal Arts that a better preparation for a scientific career will be afforded by a broader and more liberal course of study. However, those wishing to specialize in any branch of science are urged to confer freely with the professors with whom they expect to pursue such study.

Unless excused by the faculty, each student pursuing a special course in science will be required in his senior year to prepare a thesis upon some subject approved by the professor in charge of his specialty, such thesis to represent an amount of work entitling the writer to at least two credits.

COURSE IN CIVIL ENGINEERING

FRESHMAN YEAR

FALL TERM—French or German, * 5. * Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3.

WINTER TERM—French or German, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 1.

SPRING TERM—French or German, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3.

*For requirements in language and detailed description of courses in Civil Engineering see announcement of these courses on another page.

**The numerals mean hours a week.

SOPHOMORE YEAR

FALL TERM—German or English, * 3. Mathematics, 5. Surveying, 5. Physics, 5. Military Drill, 3.

WINTER TERM—German or English, 3. Mathematics, 5. Descriptive Geometry, 2. Mapping, 3. Physics, 5. Military Drill, 1.

SPRING TERM—German or English, 3. Mathematics, 5. Descriptive Geometry, 2. Topographical Surveying, 3. Physics, 5. Military Drill, 3.

JUNIOR YEAR

FALL TERM—Electricity and Magnetism, 5. Analytical Mechanics, 2. Applied Mechanics, 3. Graphical Statics, 3. Chemistry, 5. Military Drill, 3.

WINTER TERM—Dynamo and Motor, 3. Chemistry, 5. Analytical Mechanics, 2. Applied Mechanics, 3. Graphical Statics, 3. Theory of Stresses, 3. Military Drill, 1.

SPRING TERM—Thermodynamics, 3. Hydraulics, 5. Graphical Statics, 4. Theory of Stresses, 5. Military Drill, 3.

SENIOR YEAR

FALL TERM—Railroad Curves, 3. Steam Engine, 3. Sanitary Engineering, 2. Structural Designing, 4. Geology, 2. Civil Engineering, 3. Military Drill, 3.

WINTER TERM—Resistance of Materials, 2. Limes and Cements, 2. Sanitary Engineering, 2. Structural Designing, 3. Laboratory, 2. Geology, 2. Civil Engineering, 3. Military Drill, 1.

SPRING TERM—Water Supply Engineering, 3. Specifications and contracts, 3. Geology, 2. Civil Engineering, 3. Laboratory, 2. Structural Designing, 3. Thesis or Engineering Society. Military Drill, 3.

COURSE IN ELECTRICAL ENGINEERING

FRESHMAN YEAR

FALL TERM—French or German, 5. **Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3.

*For requirements in language and detailed description of courses in Civil Engineering see announcement of these courses on another page.

**Numerals mean hours a week.

WINTER TERM—German or French, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 1.

SPRING TERM—German or French, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3.

SOPHOMORE YEAR

FALL TERM—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 3.

WINTER TERM—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 1.

SPRING TERM—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 3.

JUNIOR YEAR

FALL TERM—Physics: lectures, 1; laboratory, 4. Chemistry, 5. Analytical Mechanics, 3. Applied Mechanics, 2. Shop-work, 2. Military Drill, 3.

WINTER TERM—Physics: lectures, 1; laboratory, 4. Chemistry, 5. Analytical Mechanics, 2. Applied Mechanics, 3. Shop-work, 2. Military Drill, 1.

SPRING TERM—Direct Current Dynamo, 3. Physical Laboratory, 2. Chemistry, 5. Differential Equations, 3. Heat and Thermodynamics, 2. Shop-work, 2. Military Drill, 3.

SENIOR YEAR

FALL TERM—Theory of Electricity, Photometry, Electrical Laboratory, 10. Draughting, 3. Steam Engine, 2. Military Drill, 3.

WINTER TERM—Alternate Current Machinery, Electrical Laboratory, 10. Draughting, 3. Strength of Materials, 2. Military Drill, 1.

SPRING TERM—Distribution and Transmission of Electricity, Telegraph and Telephone, Electrical Laboratory, 10. Electrochemistry, 5. Military Drill, 3.

NOTE—One year of German and one of French are required. Either may be taken during the freshman year, to be succeeded by the other in the sophomore year. Electrochemistry, being given only during even-numbered years, will alternate with the junior spring chemistry.

REGULAR STUDENTS

All students, except as provided under "unclassified students," must elect one of the courses of study, pp. 59-64, and follow it as laid down in the order as prescribed, carrying neither more nor less than fifteen hours of lectures or recitations per week, except as required by the programme of their course, or permitted by the Faculty.

UNCLASSIFIED STUDENTS

Persons twenty-one years of age, not candidates for a degree, may be admitted as unclassified students without examination, except in English, and may pursue studies at the discretion of the Faculty on the recommendation of the professors in charge of the subjects chosen. Such students of the professional Colleges as are allowed to carry additional work in this College, not candidates for a degree in this College, will be recorded as "unclassified." If unclassified students become candidates for a degree in the College of Liberal Arts, they will be required to furnish evidence, by examination or acceptable certificate, of having completed the preparatory requirements.

COMBINED COURSES

COMBINED COURSE FOR THE COLLEGE OF LIBERAL ARTS AND
THE COLLEGE OF LAW

Five hours of lectures in the College of Law may be elected by seniors in the College of Liberal Arts, for which they will receive credit as a part of their senior work. During the first year in the College of Law, students in that College may substitute for five hours per week of regular law work ten hours of work in the College of Liberal Arts, as follows: Five hours per week in Liberal Arts subjects which may be properly included in the law course, such as certain courses in History, Sociology, Economics, Politics, and Philosophy, approved by a joint standing committee representing the College of Liberal Arts and the College of Law; and, secondly, five hours per week in any other Liberal Arts work.

Students of this combined course who have taken Elements of Jurisprudence, Constitutional Law, and International Law, public and private, in the College of Liberal Arts, will be excused in the College of Law from courses in Elementary Law,

International Law, and Conflict of Laws, and also from that portion of Constitutional Law which relates to the theory and history of the constitution and distribution of powers among the departments of the Federal Government. Students electing fifteen hours a week in accordance with the conditions above provided, will receive credit in the College of Law for one year's time, but must pass examinations in all the subjects of law, except the set-offs above mentioned. The five hours of law during the first year of the combined course will be given at 9 o'clock a. m., throughout the year.

The privileges of this combined course are restricted to Liberal Arts students who have completed their junior year and are entitled to senior standing at the opening of the year. Permission to enter upon this course is granted only by the joint standing committee.

Liberal Arts students are permitted during the senior year to take five hours per week in the first year of the Law course as a substitute for a corresponding amount of work in the Liberal Arts course, receiving credit therefor.

Students in the College of Law not candidates for a Liberal Arts degree may take work in the College of Liberal Arts not to exceed five hours per week so long as they maintain a good standing in their law studies and do this elected work to the satisfaction of the professors in charge.

COMBINED COURSES IN THE COLLEGE OF LIBERAL ARTS
(SCIENTIFIC COURSE) AND COLLEGES OF MEDICINE
AND HOMŒOPATHIC MEDICINE

FIRST YEAR

German—5
Mathematics—5
Drawing—3
English—2
Military Drill—3

SECOND YEAR

German—3
English—2
Physics—5
Zoology—5
Animal Physiology—2
Military Drill—3

THIRD YEAR

Botany—5
Chemistry—5
Animal Morphology (advanced)
—5
Military Drill

FOURTH YEAR

Medical work exclusively

FIFTH YEAR

Medical work exclusively

SIXTH YEAR

Medical work exclusively

SEVENTH YEAR—TWO TERMS

French—15 term hours

Elective in College of Liberal

Arts—15 term hours

It is deemed possible for students of marked ability to complete this course in six years by taking one year's work in French and one year's work in an elective in the College of Liberal Arts, in addition to the medical work in the fifth and sixth years of the combined course, or where practicable.

Students in the Classical and Philosophical A courses may obtain the degrees of B. A. or B. Ph. and M. D. at the end of seven years, provided all of the material science in the above course is taken.

COMBINED COURSE IN THE COLLEGE OF LIBERAL ARTS (SCIENTIFIC COURSE) AND THE COLLEGE OF DENTISTRY

FIRST YEAR

German—5

Mathematics—5

Drawing—3

English—2

Military Drill—3

SECOND YEAR

German—3

English—2

Physics—5

Zoology—5

Animal Physiology—2

Military Drill—3

THIRD YEAR

Botany—5

Chemistry—5

Animal Morphology (advanced)

—5

Military Drill—3

FOURTH YEAR

In Dental College

French—15 term hours in Col
lege of Liberal Arts

FIFTH YEAR

In Dental College

Elective in College of Liberal

Arts—15 term hours

SIXTH YEAR

In Dental College

It is possible for students to take French, fifteen hours, during the fourth year, and an elective of fifteen hours in the fifth year in the College of Liberal Arts, while pursuing the work in the College of Dentistry. This is deemed feasible, due to credits allowed by the College of Dentistry for work done in the first three years in the College of Liberal Arts.

Students in the Classical and Philosophical A course may obtain the degrees of B. A. or B. Ph. and D. D. S. at the end of six years, provided all the material science in the course outlined above is taken.

BACCALAUREATE DEGREES

For each of the courses of study leading to a bachelor's degree four years' work is required.

On completion of the regular courses, or of the special courses approved by the Faculty, the following degrees are conferred :

Bachelor of Arts upon those who complete the Classical course.

Bachelor of Philosophy upon those who complete the Philosophical course.

Bachelor of Science upon those who complete the General Scientific Course, or either of the Engineering courses, or a special course in science which has previously been approved by the Faculty.

See Combined Scientific and Medical course.

The degree of Bachelor of Didactics is conferred upon *graduates* in the regular courses who have completed the required work in pedagogy and can show proof of two years' successful teaching after graduation.

SPECIAL CERTIFICATES IN GERMAN, FRENCH, AND ENGLISH

Special certificates as to scholarship in German, in French, or in English will be granted under the authority of the Faculty of the College of Liberal Arts on the following conditions :

1. They shall be issued to students of this University on or after graduation only.

2. They shall be in the nature of an authorized guaranty as to scholarship in German, in French, or in English.

3. They shall be issued only after *at least* three years of full work (to represent *five* hours of lectures and recitations a week or an equivalent) in one of these subjects.

4. Candidates must pass a final examination in the subject in which the certificate is desired.

5. The examination must be conducted by the professor in charge of the subject, assisted by such other instructors as may be agreed upon by him and the President of the University.

6. These certificates will be signed by the President and by the professor immediately concerned.

PROFESSIONAL CERTIFICATES IN PEDAGOGY

The University will grant the certificates named and described below on the following general conditions:

1. An average standing of $8\frac{1}{2}$ must be attained in all subjects.
2. The candidate must give such evidence of superior ability in his work as will, in the judgment of the Faculty, entitle him to a recommendation as a teacher or supervisor of schools. It is distinctly understood that not all work which may count towards a degree is necessarily sufficient to count towards these certificates.

I. UNIVERSITY SUPERVISOR'S CERTIFICATE

The University will issue a University supervisor's certificate to each student who includes in his course for his baccalaureate degree the work designated in this paragraph. In issuing this certificate, the University gives its official recommendation to the recipient, in view of the work which he has done during his University course, as being a person suitable to engage in the work of organizing and conducting graded schools.

The requirements are:

1. General Psychology, nine term hours.
2. Courses 1, 2, 3, 6, 8, 9, 10, and 11 in Pedagogy, aggregating thirty-six term hours.
3. General knowledge. Additional work sufficient to meet the requirements for graduation from one of the courses in the College of Liberal Arts.

II. UNIVERSITY TEACHER'S CERTIFICATE

The University will issue a University teacher's certificate to each student who includes in his course for his baccalaureate degree the work designated in this paragraph. In issuing this certificate the University gives its official recommendation to the recipient, in view of the work which he has done during his University course, as being a person suitable to engage in the public school service. The requirements are:

1. Special knowledge.

(a) The student must secure a certificate of special proficiency in one of the subjects in which the University grants such certificates; *or*

(b) He must complete an amount of work of not less than thirty-six term hours in the aggregate in a subject or group of allied subjects, which he expects to teach, and for which the University grants no special certificate.

The special subjects required, and the candidate's proficiency will be determined by the head of the department in which the major part of the work is done.

2. Professional knowledge. The student must complete the following work in the departments of Philosophy and Pedagogy:

(a) Three terms of three hours a week (nine term hours) in Psychology; and

(b) Six hours a week for a year (eighteen term hours) in Pedagogy, including the course in Child Study, and either the course in Educational Psychology, or the course in Philosophy of Education. The remainder of the pedagogical work shall be selected from courses 1, 2, and 3.

GREEK LANGUAGE AND LITERATURE

PROFESSOR FAIRBANKS; PROFESSOR CALL.

CLASSICAL ARCHÆOLOGY

The first two courses in Greek are intended to give the student an accurate knowledge of forms, syntax, and vocabulary, such that in the more advanced courses he can read with comparative ease and appreciate the character of the literature he is studying. While the first aim in all the work of the department is an accurate knowledge of the Greek language, it is not treated as a dead language, and every student is taught to feel that his work is bringing him into real contact with a people whose thought and literature and art have inspired much of what is best in our own civilization. Accurate translation into idiomatic English, reading aloud the Greek text in order to train the student to grasp the thought without the intervention of English, and writing simple Greek are practiced in connection with each course.

A. COURSES FOR UNDERGRADUATES

Courses 3, 4, and 5 are open to those who have completed course 2 or its equivalent.

1. BEGINNING GREEK—A course in beginning Greek is offered to students who desire by a special effort to acquire in one year the ability to read simple Attic prose. Goodwin's *Greek Grammar* and White's *First Greek Book* are used in the first term, and during the next two terms three books of Xenophon's *Anabasis* are read. Professor CALL.

Five hours a week (at 11) and an additional hour at the pleasure of the instructor.

2. XENOPHON'S MEMORABILIA; PLATO'S APOLOGY; HOMER'S ODYSSEY—In connection with the work in Xenophon the principles of grammar are reviewed, and special attention is given to writing Greek. After the student has become familiar with the prose of Xenophon and Plato he takes up Homer; readings in the *Odyssey* are accompanied by lectures on Homeric times and on the character of the Greek epic. Professors CALL and FAIRBANKS.

Daily at 10.

3. THE GREEK ORATORS—Fall term: The earlier Greek orators; selections are read by the class and reports are given on orations which are not read in class; lectures on the development of Greek oratory. Winter and spring terms: Demosthenes. The class reads the *Philippics* and the *Oration on the Crown* and individual members report on other orations; the special aim of the course is to introduce the class to the spirit of Greek oratory, and to the technical methods of which it made use. Professor FAIRBANKS.

Mon., Wed., Fri., at 11:00.

4. GREEK DRAMA, I; ÆSCHYLUS, PROMETHEUS BOUND; SOPHOCLES, ANTIGONE; EURIPIDES, ALCESTIS—With this course are required supplementary readings from other tragedies, and reports on the origin, literary form, and representation of Greek tragedy. Professor CALL.

Mon., Wed., Fri., at 8:00.

5. PLATO, PHÆDO; HOMER, ILIAD—The work in Plato runs through two terms and is intended as an introduction to Greek philosophy. Each member of the class is expected to read one other of Plato's dialogues and report on it.

The course in Homer (in the spring term) is intended primarily for teachers, and special attention is given to questions of language, metre, etc., which arise in high school work. The

selections read give in outline the whole story of the Iliad. Professors FAIRBANKS and CALL.

Mon., Wed., Fri., at 10:00.

6. PLUTARCH, PERICLES; LUCIAN, SELECTED DIALOGUES—The course aims to introduce the student to the later literature of Greece. It may be combined with course 3 or course 4 by students wishing to devote five hours to Greek. Professor CALL.

Two hours a week.

This course was given in 1900-1901, and will be repeated in 1902-1903.

7. OLD GREEK LIFE—Lectures, illustrated with lantern slides, books on art, etc.; collateral reading in English and examinations are required of the students; references are also given to important works in French and German for those who can use these languages. The lectures will treat of the characteristics of the land and the people; the Greek house, dress, and mode of life; marriage and funeral customs; markets and trade generally; the duties of the citizen in peace and war, etc.

Open to all members of the University except freshmen. (A knowledge of Greek is not required for this course; it is recommended to students in the philosophical course, as well as to those in the Classical course. Professor FAIRBANKS).

Tu. and Thu., at 8:30.

[8. GREEK LITERATURE—An introduction to the subject, intended both for Greek students, and for students not studying Greek. Lectures, readings, and reports. Professor FAIRBANKS.]

Two hours a week.

This course alternates with course 7, and will not be given in 1902-1903.

B. COURSES FOR GRADUATES AND UNDERGRADUATES

9. GREEK DRAMA, II; SOPHOCLES—The entire seven plays are read with care; lectures on Greek metres, and on the historical development of Greek tragedy accompany the reading; and students are expected to prepare one paper each term on a subject connected with their work. Professor CALL.

This course will be given in 1901-1902, and omitted the following year.

Three hours a week.

[10. GREEK HISTORY—An advanced course in Greek history for students who are prepared to make investigations from the original sources. In 1902-1903 the period of the Persian wars will be made the subject of the work. Professor FAIRBANKS.]

This course is given alternately with course 9.

11. GREEK ART—An introduction to Greek architecture, sculpture, vase-painting, and the minor arts. The library is rapidly obtaining the standard books necessary for this work, and already a good collection of slides is available to illustrate the lectures. Professor FAIRBANKS.

Two hours a week.

This course was given in 1900-1901, and will be repeated in 1902-1903.

12. GREEK AND ROMAN MYTHOLOGY—Lectures on the origin and transmission of myths; a study of the more important myths of Greece and Rome; and an investigation of the influence of classic myths on later literature, especially English literature. The course is designed for students of literature, as well as for those who may expect to teach either Latin or Greek. A knowledge of Greek is not required for this course. Professor FAIRBANKS.

Two hours a week.

During the current year (1900-1901) a series of illustrated lectures has been given before the University by Professor Fairbanks on subjects connected with classical art and archæology. Six of these lectures were on the general subject of Greek sculpture, and single lectures were given on Excavation in Greece, on Troy and the Cities of Homer, and on other subjects. A similar course will be given next year, probably on the general subject of Greek Mythology and Religion.

A class in the Greek New Testament will be organized by Professor Fairbanks, and all students of Greek are urged to join it. The class will meet once a week and no registration is required. The writings of John will be studied in 1901-1902.

LATIN LANGUAGE AND LITERATURE

PROFESSOR CURRIER; ASSISTANT PROFESSOR POTTER, MISS HUGHES, MISS PAINE.

A. COURSES OPEN TO UNDERGRADUATES ONLY

1. CICERO—Selected orations. Miss HUGHES.
Throughout the year; Tu., Wed., Th., Fri.

2. VERGIL—Æneid, with a course in mythology. Miss PAINE. Throughout the year; Tu., Wed., Th., Fri.

Courses 1 and 2 are for students in course Philosophical B, as indicated on page 60.

3. LIVY, CICERO, VERGIL, AND TERENCE—Fall: Livy, selections from Books I, XXI, and XXII. Winter: Cicero's *De Senectute* or *De Amicitia* and *Selected Letters*, with outline of Roman literature. Spring: Terence's *Phormio* and Vergil's *Georgics II or IV*. Grammar, writing Latin, and sight reading during the year. Those who show marked proficiency in writing Latin during the fall term are allowed an option of easy Latin, Cicero, and Aulus Gellius, to be read under the direction of the instructor during the winter and spring terms. Assistant Professor POTTER and Miss HUGHES.

Throughout the year; Tu., Wed., Th., Fri., at 10:00, 11:00, and 1:30.

4. CICERO AND HORACE—Fall: Cicero's *Tusculan Disputations*. Winter and spring: Horace's *Odes*, *Satires*, and *Epistles*. This course is mainly occupied with the literary side of the authors studied. Professor CURRIER.

Prerequisite, course 3.

Throughout the year; Mon., Wed., Fri., at 9:00.

5. PLINY AND TACITUS—Selected Letters of Pliny. Tacitus's *Germania* and *Agricola*. This course is principally literary and historical. As much attention is given to the Latinity of the Silver Age as is needful for the understanding and appreciation of the authors. Assistant Professor POTTER.

Prerequisite, course 3.

Throughout the year; Tu., Th., at 9:00.

B. COURSES OPEN TO UNDERGRADUATES AND GRADUATES

6. CICERO, QUINTILIAN, AND TACITUS—Fall: Cicero's *De Oratore*. Winter: Quintilian, Books X and XII. Spring: Tacitus's *De Oratoribus*. Particular attention will be paid to literary criticism as exemplified in these authors. Professor CURRIER.

Prerequisite, course 4 or 5.

1901-1902; Tu., Th., at 8:00.

7. TACITUS AND SENECA—Fall and winter: Tacitus, selections from the *Annals* and *Histories*. Spring: Seneca's *Morals and Letters*. Professor CURRIER.

Prerequisite, course 4 or 5.

1902-1908; Tu., Th., at 8:00.

8. **PLAUTUS**—In this course the metres are carefully studied and some attention is given to the ante-classical forms and constructions; but as provision is made in other courses (20, 21) for a more systematic study of the language, the attention is directed mainly to the Roman stage, and to contemporary and later Roman playwrights. The *Captivi*, *Trinummus*, *Menæchmi*, and *Rudens* are read together with selected scenes from the *Amphitruo*, *Miles Gloriosus*, and *Pseudolus*. The analysis of several other plays is given in informal lectures. Open to students who have taken or are taking course 6 or 7. Assistant Professor POTTER.

Fall, 1901; Mon., Wed., Fri.

9. **CICERO'S LETTERS**—As the students before taking this course will have acquired considerable facility in reading Latin, the attention will be directed to the importance of the letters as historical documents. A large number of letters will be studied, selected with reference to the light that they throw on the many sided character of the orator, and also on the social and political conditions that prevailed at Rome at the end of the Republican period. Open to students who have taken or are taking course 6 or 7. Assistant Professor POTTER.

Fall, 1902; Mon., Wed., Fri.

10. **LUCRETIVS AND CATULLUS**—The aim is to study Lucretius's art rather than his philosophical system. All the more poetic passages in the *De Rerum Natura* are read. In this course, and also in courses 11-13, considerable attention is given to the structure of the verse, and to the reading of it. Catullus is studied particularly in his relation to his successors in lyric, epic, elegiac, and epigrammatic poetry. Assistant Professor POTTER.

Winter, 1902; Mon., Wed., Fri.

11. **LUCAN, THE PHARSALIA, OR TRAGEDIES OF SENECA**—As an historical introduction to the course in Lucan, considerable portions of Cæsar's *Civil War* will be rapidly read.

In the course in tragedies introductory lectures treat of the Roman tragic writers who preceded Seneca, and of the general attitude of the Romans toward tragic composition. As the plays are read an effort is made to show the relation of the Roman to the Greek writers. Assistant Professor POTTER.

Winter, 1903; Mon., Wed., Fri.

12. **TIBULLUS AND PROPERTIUS**—The best poems of these writers will be read, together with a few elegies of Ovid. The

larger part of the term is given to Propertius. Assistant Professor POTTER.

Spring, 1902; Mon., Wed., Fri.

13. THE SATIRES OF JUVENAL; THE EPIGRAMS OF MARTIAL—The course will include incidentally a study of the private life and amusements of the Romans as set forth in these poems. Assistant Professor POTTER.

Spring, 1903; Mon., Wed., Fri.

14. COURSE IN CÆSAR AND VERGIL—This course and the following are intended to meet the needs of prospective Latin teachers and others who wish to gain some familiarity with the methods of original research. The fall term is devoted to syntactical and historical studies covering Cæsar's *Gallic War* (seven books). The work of the winter and spring terms consists of literary studies covering Vergil's complete works, but most of the time is devoted to the *Æneid*. The course presupposes a reading knowledge of these authors, and students expecting to take this course in 1901-1902, are advised to take the reading course in *Æneid* VII-XII, offered in the summer term, 1901. Open to students who have taken or are taking course 8 or 9. Assistant Professor POTTER.

Throughout the year; Mon., Wed., Fri.

15. CICERO'S CAREER AS AN ORATOR—This course combines original historical investigation covering the period from the time of the Gracchi till the death of Cicero, with the study of the orations, all of which will be considered in chronological order. About thirty of the best speeches will be read by the class. Part of one term is devoted to a special study of the conspiracies of Catiline, based largely on Sallust, Asconius, and Cicero's Letters. Assistant Professor POTTER.

Prerequisite, courses 9 and 14.

Throughout the year; Tu., Th., 1901-1902.

16. HISTORY OF ROMAN LITERATURE—The reading by the class of suitable selections will be supplemented by informal lectures on the history of the literature.

Fall: Early Latin metrical inscriptions and poetry. Winter: Lucilius and the Menippean satirists Varro, Petronius, Seneca. Spring: Late Latin; Apuleius's *Cupid and Psyche*, selections from Suetonius and the Christian Hymns. Assistant Professor POTTER.

Prerequisite, course 8 or course 9.

To be given 1902-1903; Tu., Th.

17. **ROMAN ANTIQUITIES**—A systematic study of private life and of legal and political antiquities. Professor CURRIER. Throughout the year; two hours a week at 2:30.

18. **CICERO, LIVY, AND OVID**—Sight reading of suitable selections. Professor CURRIER.

Throughout the year; one hour a week.

19. **TEACHERS' COURSE**—This course will combine theory, practice, and investigation. The members of the class will serve as assistant teachers in a beginning Latin class, and investigate assigned problems. It is intended for students who have had no experience in teaching Latin. Prerequisite, course 14 and general psychology. Assistant Professor POTTER.

Five times a week; three hours' credit; winter and spring.

C. COURSES OPEN TO GRADUATES ONLY

20. **HISTORICAL LATIN GRAMMAR ON THE SIDE OF SOUNDS AND INFLECTIONS**—This course will be based on the reading of inscriptions selected for their linguistic interest and arranged chronologically from the earliest times to the seventh century, A. D. Each member of the class will be assigned some definite problem to investigate and report upon. Assistant Professor POTTER.

Prerequisite, course 14 or course 16.

To be given 1901-1902.

21. **LATIN SYNTAX**—Introduction to the study of historical syntax. Assistant Professor POTTER.

Prerequisite, course 14 or 16.

1902-1903.

22. **SEMINARY IN ARCHÆOLOGY**—For 1902 the subject will be the Topography and Archæology of Rome and the vicinity. Professor CURRIER.

A reading knowledge of German or French is essential.

The instructors of the Latin department meet once a week throughout the year to read in course and discuss informally the entire works of some author or period. Students who have to their credit forty term hours of college Latin will be invited to participate in these meetings.

The department is well supplied with mounted photographs and lantern slides for the illustration of lectures, and especially of the work of courses 17 and 22.

FRENCH LANGUAGE AND LITERATURE

PROFESSOR VAN STEENDEREN ; MR. BATCHELDER, MISS WILLIAMS.

1. **ESSENTIALS OF FRENCH GRAMMAR**—A course in French grammar, with copious reading and composition. Mr. BATCHELDER, Miss WILLIAMS, Professor VAN STEENDEREN.

Five sections, one of which begins in the winter term.
Throughout the year, daily.

2. **FRENCH NOVELISTS OF THE XIXTH CENTURY**—Chateaubriand, Mme. de Stael, Alfred de Vigny, Victor Hugo, Alfred de Musset, Prosper Merimee, Dumas the Elder, Honore de Balzac, Alphonse Daudet, Guy de Maupassant, Francois Coppee, Pierre Loti.

This course aims to impart ability to read modern French prose, to present the important features of modern French fiction, and incidentally to aid in the development of the student's critical appreciation of literary art. To these ends translation into English is, whenever possible, cautiously and gradually abandoned towards the end of the course, while numerous talks and lectures in French, as well as in English, will illustrate the reading and explain literary movements. Professor VAN STEENDEREN and Mr. BATCHELDER.

Two sections.

Throughout the year; Mon., Wed., Fri.

3. **SYNTAX, COMPOSITION, AND HISTORICAL GRAMMAR**—A course in the principles of French language, aiming to impart ability in writing French for practical purposes on the basis of grammatical understanding. It is understood that the members of this class will be recommended to the American Committee on International Correspondence, which secures to each a correspondent of French birth.

This course may be taken with any other undergraduate course, except course 1, but it is recommended that it be taken as early as possible. Professor VAN STEENDEREN.

Throughout the year; Tu., Thu.

4. **HISTORY OF FRENCH LITERATURE**—A general survey of French literature. This course consists not only of the historical outline, but also of the study, more or less rapid, of specimens from every period. It prepares for the intelligent

and more detailed study of special periods. Professor VAN STEENDEREN.

Throughout the year; Tu., Th.

5. **TWELVE REPRESENTATIVE FRENCH DRAMAS**—Le Cid, Les Precieuses ridicules, Phedre, Zaiere, Le Barbier de Seville, Hernani, Ruy Blas, La Question d'argent, Bataille de Dames, Le Monde on l'on s'ennuie, Cyrano de Bergerac, L'Aiglon.

The subject is presented by lectures and reading from the standpoint of historical sequence and organic development. Mr. BATCHELDER.

Throughout the year; Mon., Wed., Fri.

Courses 4 and 5 are given in alternate years. Course 5 will be given in the year 1901-1902.

*6. **FRENCH LYRICS**—A study of French lyric poetry from the standpoint of historical development, as well as from that of artistic and critical appreciation. The selections studied range from the fourteenth century to the present time. The course is given in French. Professor VAN STEENDEREN.

Fall term; Mon., Wed., Fri.

*7. **OLD FRENCH**—A course in the reading of Old French verse and prose through Leon Gautier's La Chanson de Roland and Cledat's Auteurs Francais du Moyen Age. Professor VAN STEENDEREN.

Throughout the year; Tu., Th.

*8. **FRENCH SEMINARY**—Courses in the critical study of literary periods and movements. The following are offered:

- a. A course in the Literature of the XVIIth century;
- b. A course in the Romantic Movement in France;
- c. A course in the Principles of French Criticism, and
- d. A course in Advanced Composition.

During the year 1901-1902 course "c" will be given. Professor VAN STEENDEREN.

Throughout the year; two hours a week.

SPANISH LANGUAGE

1. **ESSENTIALS OF SPANISH GRAMMAR**—A course in Spanish grammar and reading. El pajar verde, Valera; El Capitan Veneno, Alarcon; Dona Perfecta, Galdos. Professor VAN STEENDEREN.

Throughout the year; Mon., Wed., Fri.

*Primarily for advanced and graduate students.

ITALIAN LANGUAGE

1. ESSENTIALS OF ITALIAN GRAMMAR—A course in Italian grammar and reading. Selections from Dante Alighieri, Petrarca, Boiardo, Torquato Tasso, Alfieri, Boccaccio, Machiavelli, Benvenuto Cellini, Goldoni, Gioberti, and Tommaseo. Mr. ———.

Throughout the year; Tu., Th.

A year of college French or of college Latin is a requisite for admission to the courses in Spanish and Italian.

For special certificates in French see the regulations pertaining to them on page 68.

GERMAN LANGUAGE AND LITERATURE

PROFESSOR WILSON; MR. STURM, DR. EASTMAN, DR.

FLOM.

In the instruction in the German language the first year is spent in laying a broad foundation for the future work. At the beginning of the second year it is expected that the students will be able to read the literature with some degree of appreciation, and from this time on the ability to understand and to appreciate the great masterpieces of German literature is the main object in view; at the same time, however, the origin and history of words and the relation that the German language bears to the English tongue, are studied and explained. But the courses are, as a whole, literary rather than strictly philological or linguistic. Sight translation, translating at hearing, writing from dictation, and conversation as means to a proper *Sprachgefuehl*, form a part of the work.

Course 1 represents from four to six terms of ordinary high school work. Courses 1, 2, 3, and 4 are freshman, sophomore, junior, and senior, respectively, and must be taken in the order of the numerals. Courses 5, 6, 7, and 8 are advanced courses, and may be taken in accordance with the regulations given below in the statement of each course. All the courses in German run through the entire collegiate year and are offered every year.

1. GRAMMAR AND READING—Thomas's *Practical German Grammar* with constant practice in writing German; Hempfl's *Easiest German Reading*; Storm's *Immensee*; Hillern's *Hoe-*

her als die Kirche, and Heyse's *L'Arrabbiata*. Seven sections. Mr. STURM, Dr. EASTMAN, and Dr. FLOM.

Throughout the year, daily.

2. FREYTAG, LESSING, GOETHE, AND SCHILLER—Fall: Freytag's *Die Journalisten*, or Lessing's *Minna von Barnhelm*, with a review of the grammar. Winter: Goethe's *Hermann und Dorothea*, or *Egmont*, and composition. Spring: Schiller's *Jungfrau von Orleans*, and composition. Four sections. Professor WILSON, Mr. STURM, and Dr. EASTMAN.

Throughout the year; Mon., Wed., Fri.

3. GERMAN AUTHORS OF THE NINETEENTH CENTURY, AND GERMAN LYRICS—Fall: Scheffel's *Ekkehard*, and readings in German on the literature of the nineteenth century. Winter: Heine's Prose, and readings from Heine's Poetry by the instructor. Spring: Buchheim's *Deutsche Lyrik*, and lectures on German verse with special reference to the lyric poets studied. The work of this term is intended to give a general idea of the historical development of the German lyric from the sixteenth century to the present. Professor WILSON.

Throughout the year; Mon., Wed., Fri., at 11:00.

4. GOETHE, LESSING, AND HISTORY OF GERMAN LITERATURE—Fall: Goethe's *Faust*, Part I, with an outline of Part II. Winter: Lessing's *Nathan der Weise*. Spring: The History of German Literature. This term's work gives a general view of the development of German literature from the earliest times to the nineteenth century, special attention being paid to the two classic periods of the twelfth and eighteenth centuries. Francke's *Social Forces in German Literature* is used as a text-book, which is supplemented by reports on assigned reading. Professor WILSON.

Throughout the year; Tu., Th., at 11:00.

5. GERMAN SEMINAR—For the study and discussion of the works of special periods or of special movements. The Faust Books, Marlowe's *Faustus*, Goethe's *Faust*, and the Romantic School are some of the subjects that have been studied. This course is primarily for graduate and advanced students. Admission by personal application. When the majority of applicants so elect this work may be made a course in Advanced German Composition. For fuller statement see Announcement of the Graduate College. Professor WILSON.

Throughout the year; Tu., Th., at 9:00.

6. MIDDLE HIGH GERMAN—This course is primarily for graduate and advanced students, especially those who expect to teach German, and candidates for admission to it must have completed at least three courses in German. Applicants should consult the instructor. Paul's *Mittelhochdeutsche Grammatik* and Bachmann's *Mittelhochdeutsches Lesebuch*. For fuller statement see Announcement of the Graduate College. Professor WILSON.

Throughout the year; Tu., Th., at 10:00.

7. OLD HIGH GERMAN—Primarily for graduates. Prerequisites: In addition to the equivalent of courses 1, 2, and 3 in German at least one of the following courses, German 4, 5, 6, 8, Gothic. Braune's *Althochdeutsche Grammatik* and *Althochdeutsches Lesebuch*. Students intending to take this course should consult the instructor before scheduling. For fuller statement see Announcement of the Graduate College. Dr. EASTMAN.

Throughout the year, two hours a week; time to be arranged.

8. THE GERMAN ROMANTIC MOVEMENT, with special reference to its social and literary aspects. As this is an advanced course, applicants should consult the instructor before scheduling. For fuller statement see Announcement of the Graduate College. Mr. STURM.

Throughout the year, two hours a week; time to be arranged.

Special certificates of scholarship in German are granted on or after graduation on conditions set forth on pages 68, 69. The *minimum* amount of work required for such a certificate is represented by courses 1, 2, and 3, and two chosen from 4, 5, 6, 7, and 8.

SCANDINAVIAN LANGUAGES AND LITERATURES

DR. FLOM.

In the department of Scandinavian it is the aim to give equal attention to Norse, Swedish, and Danish. The courses will be given strictly as outlined below, though if there should be a sufficient demand for some course not scheduled, a class may be formed. Course 1 is intended for those students who have no previous knowledge of Scandinavian. It is expected that this course will give the student such a thorough reading knowledge of modern Norse as shall enable him to read the modern literature with facility. Courses are offered to suit the

needs of students of Scandinavian parentage who have a fair knowledge of a Scandinavian language, but wish to pursue in class a more systematic study of the literature. For such students four courses are offered: one in modern Norse literature (4), one in Swedish literature (2), one in Danish literature (3), and one in Old Icelandic literature (6). The last will be preceded by a short course in Icelandic Grammar. Courses under B are intended especially for graduates, but may be taken by advanced students of sufficient preparation. In these courses, (excepting course 6), as well as those coming under C, open to graduates only, the philological side of the study is stressed. For further particulars see Graduate Announcement.

1. MODERN NORSE — ELEMENTARY COURSE — Olson's Grammar and Reader, followed by Bjørnson's *En Glad Gut*, Kielland's *Skipper Worse*, and Jonas Lie's *Den Fremsynte*. Conversation and composition. May be taken by graduate students as part of requirements for a degree.

Three times a week, throughout the year at 1:30. Given in 1900-1901. May be given in 1901-1902.

2. SWEDISH LITERATURE OF THE XIXTH CENTURY, with an introductory course in Swedish grammar. Winter and spring terms will be given to the reading of Tegner's *Friithiofs Saga* and Runeberg's *Fenrik Stals Sægner*. May be taken by graduate students as part of requirements for a degree.

Two hours a week. To be given in 1901-1902.

3. MODERN DANISH LITERATURE—Fall term: Selections from Holberg. Winter term: Oehlenschlæger's *Axel og Valborg*, *Haken Jarl*, and *Aladdin*. Spring term: Hertz and Hostrup. Lectures. Prerequisite, course 1.

Two hours a week. To be given in 1902-1903.

4. NORSE LITERATURE SINCE 1814—Lectures and class reading of masterpieces. Fall term: Bjørnson's *Synnøve Solbakken*, and *En Fallit*. Collateral reading: *En Glad Gut*. Winter and spring terms: Ibsen's *Brand*, *Peer Gynt*, and *Samsfundets Stætter*. Collateral: *Et Dukkehjem*, and Boye-son's *A Commentary on the Writings of Henrik Ibsen*.

Three hours a week; Tu., 1:30, and Th., 3:20 to 5:00. Given in 1900-1901.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUTES

5. OLD NORSE AND OLD ICELANDIC, Philological course—Sweet's *Icelandic Primer*, Nygaard's *Oldnorsk Læsebog*, and

Kahle's *Altislaendisches Elementarbuch*. Lectures on the relation of Old Norse to East and West Germanic. *Gunnlaugs-saga Ormstungu* (ed. Mogk) will be read in the spring term.

Three hours a week at 9:00. Given in 1900-1901. May be given in 1901-1902.

6. OLD ICELANDIC PROSE LITERATURE—Nygaard's *Oldnorsk Grammatik* and *Oldnorsk Læsebog*. Lectures on Old Icelandic literature. This course will be conducted in Norwegian.

Two hours a week; winter and spring terms, 1901.

7. HISTORY OF THE SCANDINAVIAN LANGUAGES—Lectures. Prerequisite, course 5. A knowledge of German and Gothic is desirable.

Two hours a week; winter and spring terms. To be given in 1902.

Courses 5, 6, and 7 are primarily for graduate students, but may be taken by specially qualified undergraduates. For courses under C see Graduate Announcement.

ENGLISH

PROFESSOR ANSLEY; ASSISTANT PROFESSOR YOUNG, DR. HAGEN, MR. BREWER, MR. SLOAN, MR. COOPER.

Candidates for baccalaureate degrees are required to complete two years of work in English in classes meeting two hours a week. Course 1 is required of freshmen. Course 6 is intended for sophomores; but course 19, with course 18 or course 10, may be substituted. Course 20, also, is accepted in place of course 6, credit for three hours of elective work through the year being given in addition to the credit for the required sophomore work. Students who earn credit for the sophomore work in any one of these ways may offer the other sophomore courses as electives.

Unless by special arrangement at the beginning, credit in any course is given only upon satisfactory completion of that course. Courses 4, 5, 6, 11, 14, 15, 16, 20, 21, 23, and 24 continue through the year. Course 12 begins and ends with the fall term. Courses 2, 13, and 19 begin with the fall term and end with the close of the winter term. Course 9 begins with the winter term and ends with the close of the spring term. Courses 3, 10, and 18 begin and end with the spring term. Several divisions of course 1 begin with the fall term and end with the close of the spring term, and one division begins with the

winter term and ends with the close of the following fall term. Students may therefore enter course 1 either in September or in January.

Special certificates of scholarship in English are granted upon conditions explained on page 68. Information as to acceptable combinations of courses will be given upon request.

(1) COMPOSITION AND RHETORIC

1. **CONSTRUCTIVE RHETORIC**—Practice in the construction of effective English prose, with observation of the principles involved. Lectures, criticism of written exercises, and studies in the work of representative modern writers. Required of all freshmen. Mr. SLOAN and Mr. COOPER.

Throughout the year; two hours a week.

2. **ADVANCED COMPOSITION**—A study of the work of good modern essayists, with constant practice in expository writing. Open to students who have completed course 1. Mr. SLOAN.

Fall and winter terms; two hours a week.

3. **POETICS**—Studies and exercises in typical forms of English verse. Admission, by consent of the instructor. Mr. SLOAN.

Spring term; two hours a week.

4. **THE SHORT STORY**—A course in narrative and descriptive prose and the art of modern prose fiction, the short story being the form selected for practice. Admission, by consent of the instructor. Mr. SLOAN.

Throughout the year; two hours a week.

5. **JOURNALISM**—A practical study of details in the work of newspaper making. During the fall term the study and practice is in writing news and editorials for the press. The winter term is devoted to proof reading and the business department of the newspaper. In the spring term a course of lectures is given on the history of printing and book-making. The development of the art is traced from its beginnings. Mr. BREWER.

Throughout the year; two hours a week.

(2) LITERATURE

6. **ENGLISH LITERATURE**—A general survey of English literature from the earliest times. Required of all sophomores, except as stated under courses 10, 18, 19, and 20 below. Assistant Professor YOUNG, Mr. SLOAN, and Mr. COOPER.

Throughout the year; two hours a week.

7. AMERICAN LITERATURE (PROSE).

Not offered in 1901-1902.

8. AMERICAN LITERATURE (POETRY).

Not offered in 1901-1902.

9. THE ENGLISH DRAMA BEFORE SHAKESPEARE—The selections in Manly's *Specimens of the Pre-Shakespearean Drama* are made the basis of this work. In studying the Miracle Plays each play is compared with its correspondent in the other cycles or with corresponding isolated plays. The student is thus made familiar with the character and the range of this interesting form of the drama. The Moralities and Interludes are studied in their relations to earlier and later dramatic forms, and the early renaissance plays give occasion for a study of classical influence, special attention being given to Seneca. Dr. HAGEN.

Winter and spring terms; two hours a week.

10. SPENSER—Studies in the poetry of Edmund Spenser and its relations to his times. Selections from *The Faerie Queene* and from other works of Spenser are read. This course with course 19 may be substituted for course 6 as required sophomore work. Dr. HAGEN.

Spring term; two hours a week.

11. SHAKESPEARE—Some elements of literary art exemplified in the plays of Shakespeare. Three representative tragedies are studied in detail. Open to all students who have completed course 1. Professor ANSLEY.

Throughout the year; three hours a week.

12. ENGLISH AND SCOTTISH POPULAR BALLADS—Lectures on the origin and nature of ballad poetry, with reading and interpretation of selected ballads. The text used is Gummere's *Old English Ballads*, but students have access also to the collection of Professor Child. Dr. HAGEN.

Fall term; two hours a week.

13. THE ROMANTIC MOVEMENT—The course begins with a study of the origins and the progress of the movement in the eighteenth century, but particular stress is laid on the period beginning with the Lyrical Ballads (1798) and ending with the death of Scott (1832). Wordsworth, Coleridge, Byron, Shelley, Keats, and Scott will be studied in representative selections. Dr. HAGEN.

Fall and winter terms; two hours a week.

14. VICTORIAN LITERATURE—Studies in the more significant phases and forms in the development of English literature during the reign of Victoria, such as Pre-Raphaelitism, the social ideals of William Morris, and the dominance of criticism and prose fiction. Professor ANSLEY.

Throughout the year; two hours a week.

15. BROWNING—A study of the work of Robert Browning, with especial reference to his philosophy of art and life. This course must be preceded or accompanied by course 6. Professor ANSLEY.

Throughout the year; two hours a week.

16. TEACHERS' COURSE—For students who are preparing to become teachers of English. A study of the English which should be taught in the high schools, under the three heads of Word-Study and Grammar, Composition and Rhetoric, and Literature. The specimens of literature included in the "uniform college entrance requirements" are studied in detail. Assistant Professor YOUNG.

Throughout the year; two hours a week.

17. THEORIES OF LITERARY CRITICISM.

Not offered in 1901-1902.

(3) PHILOLOGY

18. HISTORY OF THE ENGLISH LANGUAGE—A general course in the larger features of the development of the English language. This course, with course 19, may be substituted for course 6 as required sophomore work. Dr. HAGEN.

Spring term; two hours a week.

19. MIDDLE ENGLISH—Chaucer's *Canterbury Tales* and Langland's *Vision of William Concerning Piers the Plowman*. Lectures on the literary history of the fourteenth century. This course, with course 10 or course 18, may be substituted for course 6 as required sophomore work. Dr. HAGEN.

Fall and winter terms; two hours a week.

20. OLD ENGLISH—A study of the structure of Old English, with readings in representative Old English prose and poetry, including *Beowulf*. Students who complete this course receive credit either for five hours of elective work through the year, or for the required sophomore work and three hours of elective work through the year. Assistant Professor YOUNG.

Throughout the year; five hours a week.

21. **ADVANCED OLD ENGLISH**—Intended for students who have completed course 20. The following poems are read: Cynewulf's *Christ* (Cook's edition); Cynewulf's *Elene* (Kent's edition); *Judith* (Cook's edition). A study of the structure of Old English is included in the work. Dr. HAGEN.

Throughout the year; two hours a week.

22. **ANGLO-SAXON LAW.**

Not offered in 1901-1902.

23. **GOTHIC**—An introduction to the Gothic language. This is a course in the comparative study of Gothic phonology, morphology, and syntax, with constant reference to other Germanic dialects. Open to students who have a knowledge of Old English or of any other early Germanic dialect. The following books are used: Wright, *A Primer of the Gothic Language*, second edition, Oxford, 1900; Stamm-Heyne, *Uifilas*, 9 Aufl., Paderborn, 1896; Uhlenbeck, *Etymologisches Woerterbuch der gotischen Sprache*, 2 Aufl., Amsterdam, 1900; Streitberg, *Urgermanische Grammatik*, Heidelberg, 1896. Dr. HAGEN.

Throughout the year; two hours a week.

24. **OLD SAXON**—Designed for students who have studied Old English or some other early Germanic dialect. During the first half of the year Holthausen's *Altsaechisches Elementarbuch*, Heidelberg, 1899, is studied. The rest of the year is devoted to the *Heliand*, which is read in the edition of Behaghel or of Piper. Dr. HAGEN.

Throughout the year; two hours a week.

PUBLIC SPEAKING

PROFESSOR GORDON.

The courses in this subject naturally divide themselves into two lines of work, one line looking to debate and oratory as an end, and the other to the vocal interpretation of literature as an end. Course 1 is fundamental to both lines of work. No student will be admitted to advanced courses of work who has not taken or is not taking course 1 or its equivalent. Students desiring to study debate and oratory should pursue courses 1, 3, 4, and 5. Courses 1, 2, 6, and 7 are designed for those students who wish to study the vocal interpretation of literature. Course 8 is designed for students desiring to pursue special lines of study upon approved topics in debate and oratory.

1. **EXPRESSION IN VOICE AND ACTION**—This course is general, seeking to prepare the student in voice and body for the work of public speaking and reading. Each student is examined with reference to his individual needs, and an effort is made to adapt the work to such needs.

Fall and winter terms; three hours.

2. **LITERARY INTERPRETATION**—The lyric, epic, dramatic, and oratoric forms are studied for vocal expression.

Throughout the year; two hours.

3. **PUBLIC ADDRESS**—The preparation and presentation of an argument as to preliminary reading, structure, evidence, briefing, style, and delivery, are carefully developed. The forms of oratory are studied, and one or more illustrated by the work of the student.

Throughout the year; three hours.

4. **DEBATE**—This course seeks to develop the handling of refutation in the preparation of briefs and forensics and actual debate.

Throughout the year; two hours.

5. **ORATORY**—Takes up the problems of the audience, the style and atmosphere of the address, and the function of persuasion in speaking.

Fall and winter terms; two hours.

NOTE—See a co-ordinate course, Greek 5.

6. **THE FUNCTION OF IMAGINATION AND DRAMATIC INSTINCT IN EXPRESSION**—This is of especial value to those who expect to teach.

Throughout the year; one hour.

7. **SHAKESPEARE**—A play is studied from the standpoint of vocal expression.

Throughout the year; one hour.

8. **DEBATE AND ORATORY**—This course is designed for students desiring special work on selected topics for study and research preparatory to public presentation. Students may schedule for this course at the opening of the fall or the winter term.

Through two terms; two hours.

NOTE—See a co-ordinate course, Economics 6.

HISTORY

PROFESSOR WILCOX; MR. PLUM.

1. HISTORY OF GREECE—Text-books and lectures. This course is intended primarily for members of the freshman class. Mr. PLUM.

Fall term; two hours a week.

2. HISTORY OF THE ROMAN REPUBLIC—Text-book and lectures. This work is designed primarily for members of the freshman class. Mr. PLUM.

Winter term; two hours a week.

3. HISTORY OF THE ROMAN EMPIRE—Text-book and lectures. This work is also designed primarily for members of the freshman class. Mr. PLUM.

Spring term; two hours a week.

4. HISTORY OF MEDIÆVAL EUROPE—Text-book and lectures. This course is intended primarily for members of the sophomore class and presupposes acquaintance with the History of Greece and Rome. The course is divided into three parts to correspond with the three terms of the University year. The first part, constituting the work of the fall term, extends from the final overthrow of the western Roman empire in 476 A. D. to the death of Charles the Great, 814 A. D. The work of the winter and spring terms traces the downfall of the Carolingian system and its gradual reconstruction into Modern Europe. Mr. PLUM.

Three terms; two hours a week.

5. THE PROTESTANT REVOLUTION IN EUROPE—Lectures and special assignments. This course will include a study of the general European situation at the close of the Mediæval period, analysis of the factors in the Protestant movement and a consideration of the results of the European upheaval as far down as the outbreak of the French Revolution. Open to those who have taken course 4. Mr. PLUM.

Three terms; two hours a week.

6. CONSTITUTIONAL HISTORY OF ENGLAND—Analyses and lectures. This course is intended for members of the junior and senior classes only. As much previous work as possible in Ancient and Mediæval History should be taken before beginning. Professor WILCOX.

Three terms; three hours a week.

7. **CONSTITUTIONAL HISTORY OF THE UNITED STATES**—Lectures. This course is designed for senior and graduate students. The course embraces, during the fall term, the study of the origin and development of the constitution of the United States from preceding political forms. The winter and spring terms finish the work with a study of the working of the United States Government under the constitution from 1789 to the present. Professor WILCOX.

Three terms; three hours a week.

8. **THE FRENCH REVOLUTION**—This course is designed for senior and graduate students. Considerable work in Mediæval History is an indispensable prerequisite. Professor WILCOX.

Fall term; two hours a week.

9. **THE ERA OF NAPOLEON IN EUROPE**—This course, like course 8, is designed for upper classmen and graduate students. Professor WILCOX.

Winter term; two hours a week.

10. **THE NINETEENTH CENTURY IN EUROPE**—This is a sequel to courses 8 and 9, and is open to the same class of advanced students. Professor WILCOX.

Spring term; two hours a week.

11. **SEMINARY IN ENGLISH HISTORY**—This course is intended primarily for graduate students who are qualified to specialize in English history. Those senior students who have had course 4, and are capable of doing original and independent work, will also be admitted to this seminary. Professor WILCOX.

Three terms; two hours a week.

12. **SEMINARY IN UNITED STATES HISTORY**—This course is also primarily designed for graduate students, but exceptions are made similar to those specified for course 9. Professor WILCOX.

Three terms; two hours a week.

All the courses in history, including the two seminaries, are given each year. There are no alternating courses.

All courses in history are elective. Admission to the courses is conditioned only upon the qualifications of the candidate who desires to take them.

Students are advised to plan their historical work so that it will be logical in its order of sequence. Students who intend to

emphasize historical work in college are urged to make careful preparation in history in preparatory schools.

In arranging the courses in history in the University, the attempt has been made to present the entire field of historical study with reference to logical and chronological sequences, so that no period shall be neglected, and each period treated in the light of what goes before and what comes after.

POLITICAL SCIENCE

PROFESSOR SHAMBAUGH.

For undergraduate study the fundamental course offered in Politics is course 1, entitled Historical and Descriptive Politics. Students who wish to elect but one course in the department of Political Science are advised to schedule for this course. Those who desire to pursue a more extended line of study in political and social science are advised to schedule for this course in their sophomore year.

Courses 2, 3, and 4 constitute a study, extending through one year, in the principles of government in the United States.

Courses 5 and 6 constitute a liberal introduction to the study of law. Students in the College of Liberal Arts who in their senior year begin the study of law in the College of Law are advised to schedule for these courses. Credits for these courses will be accepted in the College of Law, which will excuse the student from the following required courses: Elementary Law (fall term, eight weeks) and Constitutional Law (winter term, six weeks).

Students in the College of Law who, in addition to their required studies in law, desire to pursue studies in the department of Political Science, are advised to elect courses 5, 6, and 7. Such students may, however, elect other courses with the advice of the head of the department.

A. COURSES FOR UNDERGRADUATES

1. HISTORICAL AND DESCRIPTIVE POLITICS—In the study of politics this course is fundamental, being a general introduction to the phenomena of government among men from primitive times to modern days. The scope of this course may be briefly indicated as follows:

Fall term: The early history of mankind, wherein evolution and the fundamental laws of human progress will be ex-

plained and their application to the development of political institutions clearly indicated; a general consideration of Anthropology with reference to its bearing upon the study of political evolution; the primitive social and political institutions of the Indo-European peoples; the origin of government historically considered; the political institutions of the ancient Greeks, and a consideration of their political ideals; the political institutions of the Romans, and a consideration of their contributions to public law and jurisprudence.

Winter term: Primitive Germanic institutions; the markgenossenschaft; feudalism; the political significance of the French Revolution; government in France since the Revolution; government in Germany—the Empire and Prussia.

Spring term: Government in Switzerland—federal and cantonal; government in England and the English colonies. Open to all students except freshmen.

Throughout the year, three hours; Mon., Wed., Fri.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

2. THE HISTORICAL BASIS OF GOVERNMENT IN THE UNITED STATES—A study of the sources and the early development of government in the United States. Herein our Anglo-Saxon inheritances, government in the Colonies, the growth of federalism, and the establishment of the first state governments will be considered. The following documents will be studied and analyzed: Magna Charta, the Act of Habeas Corpus, the Petition of Right, the Bill of Rights, Colonial Charters, Plans for Union, Articles of Confederation, Declaration of Independence, the First State Constitutions, and the Constitution of the United States. Open to juniors and seniors.

Fall term, three hours; Mon., Wed., Fri.

3. POLITICAL PARTIES—A study in the practical workings of American government, wherein the history, organization, operation, and influence of political parties will be discussed. Open to juniors and seniors.

Winter term, three hours; Mon., Wed., Fri.

4. LOCAL GOVERNMENT—A study of local government in the United States, wherein the development of the several forms of township, county, and township-county government will receive special consideration. Open to juniors and seniors.

Spring term, three hours; Mon., Wed., Fri.

5. **ELEMENTS OF JURISPRUDENCE**—A study of the nature, definition, classification, and divisions of law. The course will include lectures on the history and fundamental principles of the civil law of Rome and the common law of England. The discussions will be largely non-technical. Open to juniors and seniors and law students.

Fall term, three hours; Mon., Wed., Fri.

6. **AMERICAN CONSTITUTIONAL LAW**—A study of the nature, principles, and powers of government in the United States as reflected in written constitutions and in judicial interpretation. Leading cases in constitutional law will be read and discussed. Open to juniors and seniors and law students.

Winter term, three hours; Mon., Wed., Fri.

7. **GOVERNMENT IN IOWA**—A course of lectures on the history of government in the commonwealth of Iowa.

Spring term, three hours; Mon., Wed., Fri.

8. **AMERICAN POLITICAL THEORY**—A course of lectures on American political ideas and ideals, wherein leading state papers will be analyzed, and the political theories of such representative American thinkers as William Penn, Thomas Paine, Washington, Hamilton, Jefferson, John Adams, Samuel Adams, Madison, Fisher Ames, Marshall, Monroe, Webster, Calhoun, Clay, Alexander Stephens, and Lincoln will be discussed and criticised. Open to juniors and seniors.

Throughout the year, two hours; Tu., Th.

C. COURSES OPEN TO GRADUATES

9. **COMPARATIVE CONSTITUTIONAL LAW**—A critical study of the leading constitutions of Europe and America, wherein the general and theoretical aspects of government will be considered.

Fall term; two hours.

10. **ADMINISTRATIVE LAW**—A comparative study of administrative law in France, Germany, England, and the United States.

Winter term; two hours.

11. **POLITICAL THEORY**—In this course a system of pure political theory will be outlined and correlated with philosophy.

12. **SEMINAR IN POLITICAL SCIENCE**—In 1901-1902 selected subjects in American political theory will be assigned for critical study and discussion.

13, SEMINAR IN IOWA HISTORY AND POLITICS—This seminar is intended for all those who are engaged in research work in Iowa history and politics.

SOCIOLOGY AND POLITICAL PHILOSOPHY

PROFESSOR LOOS; MR. CADY.

The courses in this department are open to juniors and seniors in the College of Liberal Arts, and to graduate and professional students. Courses 1, 2, and 3, and courses 4 and 5 are consecutive. The general work in this department should begin either with course 1 or with course 4; but on permission of the professor in charge course 2 may be entered without having previously taken course 1; and course 5 without course 4.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

1. SOCIOLOGY—The Principles of Sociology. A study of the primary factors and forces of social phenomena, with introductory lectures on anthropology and ethnology, followed by a systematic examination of the qualities of social institutions, gentile and civic. The course closes with a brief review of social theory from Plato to Spencer. Professor LOOS.

Fall term; Mon., Wed., Fri., at 9:00.

2. SOCIOLOGY—Applied Sociology. In this course an attempt is made to apply the principles of sociology in the consideration of present problems of society in the sphere of police, sanitation, charities and correction. Careful attention is given to the psychic factors, to the will and knowledge, and to the importance of education and the modification of environment as factors in social progress and social amelioration, counteracting mal-heredity and unfavorable environment. Professor LOOS.

Winter term; Mon., Wed., Fri., at 9:00.

3. SOCIOLOGY—A continuation of course 2 with special reference to the economic and social problems of modern cities. Professor LOOS and Mr. CADY.

Spring term; Mon., Wed., Fri., at 9:00.

4. THE INDUSTRIAL REVOLUTION IN ITS SOCIAL ASPECTS—A study in recent social history and political philosophy—an analysis of the industrial revolution in its social aspects with special attention to the development of individualistic philosophy and its reaction on practical politics and leg-

islation. The course will open with introductory lectures on culture history and the economic foundations of society. Professor LOOS.

Fall term; Mon., Wed., Fri., at 11:00.

5. **SOCIALISM AND CONTEMPORARY SOCIAL LEGISLATION**—A critical examination of contemporary socialism and current tendencies in legislation, 1860-1900. Special attention will be given to modern labor legislation and to the problem of monopolies and trusts. Professor LOOS.

Winter term; Mon., Wed., Fri., at 11:00.

6. **INTERNATIONAL LAW**—The nature and sources of international law. The rules of war and peace. The conflict of laws. For this course the College of Law allows credit to those who are registered in the combined collegiate and law course of study. Open to juniors, seniors, and professional students. Professor LOOS.

Spring term; Mon., Wed., Fri., at 11:00.

7. **COMMERCIAL GEOGRAPHY AND THE CONSULAR SERVICE**—During the year 1900-1901 this course was given as part of a course in international law, running through the winter and spring terms, by Mr. J. E. Conner. Hereafter it will probably be given as an independent course. Mr. CONNER.

Time to be arranged.

C. COURSES OPEN TO GRADUATES ONLY

8. **POLITICAL PHILOSOPHY**—A study of political philosophy with special reference to modern conditions and problems. During the fall term the class will read Spencer's *Man vs. the State*, Huxley's *Administrative Nihilism*, Plato's *Republic*, Aristotle's *Politics*, and selections from the writings of Thomas Green Hill and other modern philosophers. This will be followed by a course of lectures presenting a systematic sketch of the development of political philosophy and the elements of legal history during the winter term, and a more special examination of the current dogmas of individualism and socialism during the spring term. Professor LOOS.

Throughout the year, two hours; to be arranged.

9. **GRADUATE SEMINARY IN SOCIOLOGY**—Designed to assist graduate students in original and advanced lines of research. The ethnological and social conditions of the island

populations of the United States will form the principal subject of inquiry for the year 1901-1902. Professor LOOS.

Throughout the year; time to be arranged.

ECONOMICS

PROFESSOR LOOS; DR. PATTERSON, MR. CONNER.

Students in the College of Liberal Arts who look forward to special study in the school of political and social science are advised to elect the elementary course in economic history and the introductory course in economic theory (economics 1 and 2) in their sophomore year. Juniors and seniors will, however, be admitted without such preparation to the set of courses here outlined under B. Course 3 is a general introductory course for all courses under B.

A. COURSES PRIMARILY FOR UNDERGRADUATES

1. **ECONOMIC HISTORY**—After an introductory study of primitive man and primitive civilization (Starr's First Steps in Human Progress) the course will occupy itself mainly with the development of trades and manufactures in Europe (Gibbin's Industry in England), and later with the industrial development of the United States (Wright's Industrial Evolution of the United States). Open to sophomores. Two sections. Dr. PATTERSON.

Fall term; Tu., Th., 8:00 a. m., 1:30 p. m.

2. **ECONOMICS**—An introduction to the leading principles of economic science. Designed for the general student and as a basis for more advanced studies in economics. Two sections. Open to sophomores and special students. Dr. PATTERSON.

Winter and spring terms; Tu., Th., 8:00 a. m., 1:30 p. m.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

3. **POLITICAL ECONOMY**—An advanced course. This course, which treats primarily of the organization of modern industry, will be introduced by a brief study of the nature, scope, and fundamental concepts of economic science. Competition, speculation, combination of capital, panics, and depressions will be among the topics considered. Required readings in Hadley and Marshall. Open to juniors and to any who have taken courses 1 and 2 or their equivalent. Dr. PATTERSON.

Fall term; Mon., Wed., Fri., at 9:00.

4. PUBLIC FINANCE AND TAXATION—This course is designed as a continuation of course 3. The work, opened by a brief consideration of public expenditure, public income, and public debts, will center in an intensive study of taxation: (1) principles of; (2) methods and systems of, with special reference to incidence; (3) revenue systems of the United States and of Iowa. Assigned readings in Seligman's *Essays on Taxation* and other works, with special assignments of topics for reports to be prepared from original sources. Dr. PATTERSON.

Winter and spring terms; Mon., Wed., Fri., at 9:00.

5. STATISTICS—Lectures and investigation. A study of population in Europe and America, grouped under the heads: structure of the population, numbers, density, races and nationalities, sex, age, conjugal condition, and occupation. Growth of population: natural increase; births, intensity; sexes, nationality; marriages, intensity, age, productivity; deaths, intensity, sex, age, causes, epidemics, and suicides. Immigration and emigration. Population in its economic aspects, agriculture, mining, manufacturing, commerce, railroads, banks, money, prices, wages, consumption. Population in its social aspects, education, pauperism, and crime.

Readings in the literature of the subject will be assigned, and special care taken to acquaint the student with the practical use of the principal governmental publications bearing on the subjects discussed. Dr. PATTERSON.

Throughout the year; Tu., Th., at 11:00.

Not offered in 1901-1902.

6. DEBATING COURSE—Selected topics in economics, politics, and sociology. Open only to students who have taken at least one course in one of these subjects. Two hours throughout two terms. Students may schedule for this course at the opening of the fall term and again at the opening of the winter term; those who begin the course in the fall term continue it through the winter term, and those who begin it in the winter term must carry it through the spring term in order to receive credit. Professors LOOS and WILCOX, and Dr. PATTERSON.

Two terms; hours to be arranged.

NOTE—Students desiring formal instruction in the art of debate are advised to elect *Public Speaking 4* in charge of Professor Gordon. For

further explanation of the relations of *Economics 6* to the courses in public speaking students are referred to Professor Gordon or to the professors in charge of *Economics 6*. Compare also *Public Speaking 8*.

7. TRANSPORTATION—The course will deal chiefly with railroads; railroad organization and management, explanation of terms in common use in railroad accounts and reports, history of railroad development, discussion of rates, competition, discrimination, state management (Hadley's *Railroad Transportation*), and the commission system—state and interstate. Dr. PATTERSON.

Winter and spring terms; Tu., Th., at 9:00.

THE INDUSTRIAL REVOLUTION IN ITS SOCIAL ASPECTS AND CONTEMPORARY SOCIALISM—See Sociology and Political Philosophy, 4 and 5. Professor LOOS.

NOTE—Additional courses in Commerce and Industrial History, including courses in money, banking, insurance, and similar subjects, can probably be announced before September, 1901.

C. COURSES OPEN TO GRADUATES ONLY

8. ADVANCED ECONOMIC THEORY—Lectures and readings. The rise and development of the classical school of economists will first be considered. This will be followed by a study of the recent development of political economy. Portions of Adam Smith's *Wealth of Nations*, Malthus's *Essays on Population*, Ricardo's *Political Economy*, and Cairnes's *Leading Principles* will be read by the class. Later the writings of Marshall, Patten, and Clark will be considered, as showing the recent development of the theory of rent and the newer aspects of the science. Dr. PATTERSON.

Throughout the year, two hours a week; time to be arranged.

9. HISTORY AND THEORY OF STATISTICS—A study of the development of the statistical method and theory. The history, organization, and function of statistical agencies at home and abroad. The methods employed by the census department and labor bureaus will be studied and criticised. Dr. PATTERSON.

Fall and winter; two hours, once a week.

PHILOSOPHY

PROFESSOR PATRICK; ASSISTANT PROFESSOR SEASHORE,
DR. BAWDEN, MISS WILLIAMS.

1. DEDUCTIVE LOGIC—An elementary course. Text-book: Creighton's *Introductory Logic*, with reading in Welton's *Logic* and Mill's *Logic*. Professor PATRICK.

Fall term, two sections; two hours a week.

2. INDUCTIVE LOGIC—An introductory course on scientific method. Lectures, with supplementary reading in Hibben's *Inductive Logic*, Mill's *Logic*, Jevons's *Principles of Science*, and Welton's *Logic*. Dr. BAWDEN.

Winter term, two sections; two hours a week.

3. ETHICS—An introductory course in the facts of the moral life and in the theory of morals. Lectures and recitations. Dr. BAWDEN.

Spring term, two sections; two hours a week.

4. INTRODUCTORY PSYCHOLOGY—The lectures will be accompanied by demonstration with apparatus and other illustrative material from the psychological laboratory and by supplementary reading from the standard texts. This course should be taken preliminary to all other courses in the department, except courses 1, 2, and 3, which may be taken with it. Professor PATRICK and Dr. SEASHORE.

Throughout the year, two sections; three hours a week.

5. LABORATORY COURSE IN EXPERIMENTAL PSYCHOLOGY—The exercises are so arranged as to familiarize the student with the method, the apparatus, and the results of typical experiments in each of the approved lines of psychological research. Two periods are spent on each problem. During the first the experiment is performed by each individual, the class being divided into groups of two. During the second the results and the literature on the subject are discussed on the *seminar* plan. The manual of the course is furnished in mimeograph copies. Prerequisite, course 4, or some other introduction to psychology. Dr. SEASHORE and Miss WILLIAMS.

Throughout the year; two hours a week.

6. HISTORY OF PHILOSOPHY—This course will serve as a general introduction to philosophical problems as well as to the history of thought. Attention will be given to the definition of terms and the explanation of the meaning of the various phil-

osophical problems. Greek philosophy will be studied in the fall term, and mediæval and modern philosophy in the winter and spring terms.

This course should be taken as preliminary to all advanced courses in philosophy, and, where possible, should be preceded by the elementary courses in psychology, logic, and ethics. Professor PATRICK.

Throughout the year; three hours a week.

7. **COMPARATIVE PSYCHOLOGY**—A study of the mental life of the lower animals, and the evolution of animal consciousness; an introduction to genetic psychology. The following topics will be discussed: The problem and method of comparative psychology; the psychic life of micro-organisms; plant and animal tropisms; the criterion for the presence of consciousness in the lower animals; instinct and reason; the psychogenesis of the various senses; a comparison of animal with human consciousness. Prerequisite, course 4, or its equivalent. Dr. BAWDEN.

Fall term; three hours.

8. **PSYCHOLOGY OF THE CHILD**—The physical and mental growth of the child. The theory of recapitulation. The child type. The laws of mental development and the mental characteristics of infancy, childhood, and adolescence. The lectures in this course will be supplemented by reading in the extensive literature of the subject, and by reports from members of the class upon special subjects, such as imitation, interest, play, the color sense, etc. Prerequisite, course 4, or some other introduction to psychology. Professor PATRICK.

Winter term; three hours a week.

9. **ABNORMAL PSYCHOLOGY**—A general survey of the laws of abnormal mental phenomena. Abnormal perception, memory, imagination, reasoning, will, and feeling will be discussed with reference to the explanation of sleep, hypnosis, illusions, automatisms, alterations of personality, insanity, degeneracy, and crime. Lectures and reading. Dr. SEASHORE.

Spring term; three hours a week.

The following courses in the Graduate College may be taken by seniors in the College of Liberal Arts who have full preparation for them:

10. **INTRODUCTION TO METAPHYSICS**—Definition and scope of metaphysics. Discussion of metaphysical terms.

Theories of reality, with a critical examination of materialism. The *seminar* method will be followed. Professor PATRICK.

Fall term; two hours a week.

11. PHILOSOPHY OF THEISM—The conception of God in the religions of the Hindoos, Persians, Egyptians, Jews, and Greeks. The conception of God in the Christian religion and in modern thought. Final causes. The bearing of evolution on theism. Pantheism. This course is a continuation of course 10. Professor PATRICK.

Winter term; two hours a week.

12. HISTORY AND PHILOSOPHY OF MYSTICISM—The chief ancient, mediæval, and modern mystics will be studied in detail so far as time permits, and the principal mystic writings will be examined. Vaughan's *Hours With the Mystics*, Recejac's *The Bases of the Mystic Knowledge*, and Inge's *Christian Mysticism* will be used as texts. This course is a continuation of course 11. Professor PATRICK.

Spring term; two hours a week.

13. ADVANCED ETHICS—This course will be both historical and constructively critical. It will begin with a consideration of the ethical problem and standpoint and proceed to an examination of fundamental ethical principles and the typical ethical theories. It will include a discussion of the moral ideal, the moral standard, the moral struggle, and the problems of freedom and responsibility. Prerequisite, course 3. Dr. BAWDEN.

Fall term; two hours a week.

14. HISTORY AND THEORY OF ÆSTHETICS—The history of æsthetic discussion and æsthetic theories from the Greeks to the present time. Analysis and criticism of æsthetic principles and theories from the standpoint of psychology. Prerequisite, course 4 and course 6, or their equivalents. Dr. BAWDEN.

Winter term; two hours a week.

15. MODERN IDEALISM—A lecture course with assigned readings in Kant's *Critique of Pure Reason* and Hegel's *Logic*. The aim will be to show the positive contribution of German idealism to modern thought; (1) by a study of the chief representatives of this movement, and (2) by tracing its influence, especially in English and American writers. Prerequisite, course 6 or its equivalent. Dr. BAWDEN.

Spring term; two hours a week.

16. **ADVANCED PSYCHOLOGY**—A systematic study of the problems of normal adult human psychology. Reading, lectures, and discussions. Dr. SEASHORE.

Throughout the year; two hours a week.

17. **SPECIAL RESEARCH IN PSYCHOLOGY**—Original investigations of special problems in psychology. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *University of Iowa Studies in Psychology*. Dr. SEASHORE; Professor PATRICK, and Miss WILLIAMS.

Throughout the year; hours to be arranged with instructors.

18. **EXPERIMENTAL PSYCHOLOGY OF THE CHILD**—A course in the experimental study of school children. The purpose is to give training in the methods of experimental child-study by making actual investigations on current problems in the development of mind. Prerequisite, course 4. Dr. SEASHORE.

Spring term; two hours a week.

As a first year's five-hour course in philosophy for sophomores and juniors, courses 1, 2, and 3 (logic and ethics), and course 4 (psychology) are recommended. As a three-hour course the student may take course 4 alone, or as a two-hour course he may take courses 1, 2, and 3 alone.

As a second year's course the following may be taken, singly or in combination: Course 6, three hours; course 5, two hours; courses 7, 8, and 9, three hours.

All courses in philosophy are elective, except that candidates for the degree of Bachelor of Philosophy in course Philosophical A are required to take the equivalent of three terms' work of two or three hours each in this department. Course 4 or courses 1, 2, and 3 are recommended for this requirement.

During the year 1901 the new psychological laboratory in the Hall of Liberal Arts will be occupied. It will include five commodious laboratory rooms, a work shop, a dark and quiet room, in addition to the lecture rooms, offices, and seminary room belonging to the department of philosophy. The laboratory has been especially designed and built for its purpose and provided with water, gas, and complete electric connections. A partial description of the equipment of the laboratory will be found in this bulletin under the head of Material Equipment. The library of philosophy is supplied with the standard works in logic, psychology, ethics, and philosophy and is open daily from 8:00 a. m. to 5:00 p. m.

PEDAGOGY

PROFESSOR MCCONNELL; ASSISTANT PROFESSOR BOLTON,
MR. DORCAS.

The department of pedagogy in its present organization embraces the following more or less distinct branches of University work:

1. The giving of the regular courses of instruction;
2. The direction of the University extension work of the University;
3. The work of the University Examiner;
4. The inspectorship of schools.

The head of the department at present offers no courses of instruction, but under the authority of the Board of Regents devotes his time to the inspection of schools and to the management of the University extension work of the University; while the instructor in this department divides his time between his duties as University Examiner and his courses of instruction in pedagogy.

For information concerning the certificates granted by the University through the medium of this department, see page 69.

ELEMENTARY COURSES

1. **GENERAL PEDAGOGY**—This course is designed primarily for students who have not had experience in teaching, or who have not pursued a course in general psychology. The lectures will be largely supplemented by required readings and written and oral reports. Fall term: The psychological bases of the principles of teaching. The general topics are: the connection between the body and the mind; the functions of the mind; and the nature, development, and interrelation of the intellectual, the emotional, and the volitional functions of the mind. Throughout this part of the course the pedagogical bearings of these studies in psychology will be kept constantly in view. Winter term: The sequence of subjects as determined by the laws of mental development, and the general methods of teaching as derived from the general forms of the mind's activity. The application of the general method will be illustrated in discussions of special methods of teaching certain subjects, particularly the language arts, arithmetic, geography, and history. Spring term: School management, including the following topics: school

incentives; school examinations—their uses and abuses; school punishments—their nature, end, and means; the relation of school instruction and school government to will-training and character-building. Mr. DORCAS.

Throughout the year; five hours a week.

2. **TEACHING AND GOVERNING**—This course will embrace a careful study of the fundamental principles of methods of instruction. Such topics as apperception, induction, lesson units, sequence, etc., will be elucidated. Then will follow a practical illustration of these various laws to subject matter of instruction. The following branches will receive the most attention: Mathematics, the language arts (reading, grammar, composition), history and geography. Designed to be thoroughly practical throughout. Through the kindness of the school authorities of Iowa City, students in this course will be allowed the privilege of visiting the schools to observe methods employed. Lectures on school government, school law, and school sanitation will conclude the course. Assistant Professor BOLTON.

Throughout the year; Tu., Th., at 10:00.

3. **HISTORY OF EDUCATION**—This course will consist of three distinct parts: (a) The ancient and mediæval period, (b) the modern period, and (c) the history of education in the United States. The work will consist of lectures, recitations, and essays on assigned topics. Mr. DORCAS.

Throughout the year; two hours a week.

4. **JOURNAL CLUB**—This club meets weekly for the discussion of current educational literature. A report is usually given by some member upon articles of current interest, and then all join informally in its discussion. It has proven of great mutual benefit to students joining. Open to students of pedagogy. Assistant Professor BOLTON.

Throughout the year., Th., at 4:30.

5. **SEMINARY IN SECONDARY EDUCATION**—This seminary will afford its members an opportunity to make a practical study of high school work. The work will include a careful examination of the text-books used in secondary schools, the preparation of examination questions for use in secondary schools, and the judging of examination papers prepared by high school pupils. MR. DORCAS.

Throughout the year; two hours a week.

ADVANCED COURSES

6. **EDUCATIONAL PSYCHOLOGY**—This will be introductory to course 7 in the philosophy of education. The course deals with the training of the mental powers, and the psychological laws underlying all educational processes. Among the topics discussed are the following: Meaning of mental development, the education of the nervous system, mental hygiene, habit, association, memory, imagination, apperception, instinct, from the educational point of view. Training in sense-perception and observation. Feeling and volition in relation to instruction and training. Suggestion and imitation as forces in education. Assistant Professor BOLTON.

Fall term; Mon., Wed., Fri., at 10:00.

7. **PHILOSOPHY OF EDUCATION**—The meaning of education considered from the standpoint of (1) psychology, (2) neurology, (3) biology, (4) anthropology, (5) sociology. Varieties of education; varying educational ideals at different times and among different peoples; educational means, educational values. Theories maintained by classical writers on education, such as Plato, Comenius, Pestalozzi, Froebel, Herbart; contemporary writers, as Hall, Harris, Rein, Dewey, etc. A study of such questions as the culture epochs, concentration, correlation, nascent periods, etc. The application of the foregoing to the making of courses of study. Assistant Professor BOLTON.

Winter and spring terms; Mon., Wed., Fri., at 10:00.

8. **CHILD STUDY**—The course includes (1) a general survey of the meaning, methods, and scope of child study; (2) a survey of the history of the subject; (3) a careful study of the literature; (4) a discussion of some of the special methods employed; (5) the value of child study to teachers and parents; (6) its bearing upon pedagogy; (7) the assignment of an easy problem for investigation. Assistant Professor BOLTON.

Winter and spring terms; two hours a week.

9. **ORGANIZATION AND ADMINISTRATION**—The problems of organization and administration as they confront the school superintendent or principal. The general powers and duties of the superintendent; the gradation and classification of schools; courses of study and the adjustment of programmes; the relation of the superintendent to patrons, teachers, pupils, and the community. Assistant Professor BOLTON.

Fall term; two hours a week.

10. **SCHOOL SYSTEMS IN THE UNITED STATES**—An examination of typical state and city school systems of the United States. Assistant Professor BOLTON.

Winter term; two hours a week.

11. **FOREIGN SCHOOL SYSTEMS**—A comparative study of the organization and administration of the school systems of Germany, France, England, and Ontario. Consideration will be given to the relations of the schools to the state, organization and equipment of schools, courses of study, training of teachers, success of the system with reference to (a) the development of the individual and (b) the demands of society. Assistant Professor BOLTON.

Spring term; two hours a week.

12. **SEMINAR IN THE THEORY AND PRACTICE OF TEACHING**—Open only to advanced undergraduate students in pedagogy. This course will afford an opportunity for the special investigation of simple educational problems. It will form an introductory course in seminar methods of research. Assistant Professor BOLTON.

Throughout the year; two hours a week, Tu., 7:00 to 9:00 p. m.

NOTE—See the courses of study for graduates for several additional opportunities for a variety of advanced work.

ANIMAL MORPHOLOGY AND PHYSIOLOGY

PROFESSOR HOUSER; MR. LAMBERT, MR. STROMSTEN.

The courses offered by the department of Animal Morphology and Physiology have reference to the needs of: (i) those who look forward to the work of teachers and investigators in some branch of pure biological science; (ii) those who wish to lay a broad foundation for the study of medicine, or for research in more distantly related fields, as psychology, sociology, sanitary science; (iii) those desiring to obtain a general conception of the biology of animals as a part of a liberal education.

Familiarity with elementary physics and chemistry, and some skill in drawing will be advantageous in all of the courses. The more advanced courses presuppose the ability to read German and French. Additional requirements for entrance to any course are stated in the description of the course.

A. COURSES OPEN TO UNDERGRADUATES ONLY

1. **ELEMENTS OF ANIMAL BIOLOGY**—This course is designed to give a general introduction to the structure and activities of animals, and to develop the fundamental principles of biology from the side of animal life. Laboratory work, with lectures following the completion of the principal studies. The work begins with the study of the unicellular animals and the elementary vital phenomena. Proceeding to more complex forms, representatives typical of the several groups are successively examined through dissection and the use of the microscope.

Throughout the year, four term hours. Lectures, Fri. at 10:00. Professor HOUSER. Laboratory work, Mon. and Wed., 1:30 to 4:30. Mr. LAMBERT and an assistant.

2. **ELEMENTS OF ANIMAL PHYSIOLOGY**—Lectures, reading, and laboratory work on the physiology of the animal or ganism. This course presents essential principles, and, while serving the purposes of the general student, may also form the basis for the work of the teacher or specialist in human physiology. Text-book, Huxley's *Lessons in Elementary Physiology*, with additional references to works in the departmental library.

Throughout the year; two and one-half term hours. Lectures, Tu. at 10:00. Professor HOUSER. Laboratory work, Thu., 1:30 to 4:30. Mr. LAMBERT and an assistant.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

3. **COMPARATIVE ANATOMY OF VERTEBRATES**—The dissection of a series of representative protochordate and vertebrate forms, accompanied by lectures, conferences, and reading from Wiedersheim's *Comparative Anatomy of Vertebrates*. This course, while also a preparative for the study of human anatomy, is intended primarily for those expecting to pursue advanced courses in animal morphology. Mr. LAMBERT and an assistant.

Throughout the year; Tu., Fri., 1:30 to 4:30.

4. **VERTEBRATE HISTOLOGY**—This is a laboratory course on the microscopical anatomy of the tissues and organs of vertebrates, with constant use of the reference library. The work includes the principles and more general methods of investigation, particularly fixing, imbedding, sectioning, staining, and mounting. The training in technique provided by this course

is a necessary preparation for all higher courses offered by the department. Professor HOUSER and Mr. STROMSTEN.

Fall term. Lectures: Thu., 1:30. Laboratory work: Mon., Wed., 1:30 to 4:30.

5. EMBRYOLOGY OF VERTEBRATES—Lectures on the comparative embryology of vertebrates, supplemented by required reading. Demonstrations and practical studies of germ-cells, oogenesis, spermatogenesis, fertilization of the ovum, cleavage of the fertilized egg, and formation of the germ-layers of the embryo. Later on, the laboratory work consists of the preparation and study of the chick at successive stages of development during the first four days of incubation. Prerequisite, courses 3 and 4. Professor HOUSER and Mr. STROMSTEN.

Winter and spring terms. Lectures: Thu., 1:30. Laboratory work: Mon., Wed., 1:30 to 4:30.

6. COMPARATIVE NEUROLOGY—A course on the structure and physiology of the nervous system and its terminal organs. The study has a wide scope, touching invertebrate nervous mechanisms in a general way, but going into greater detail in the vertebrate series. The subject is presented by lectures, references to literature, anatomical work, and microscopical study through the use of the neurological methods of Golgi, Weigert, Nissl, Ehrlich, and others. Prerequisite, courses 3, 4, and 5. Professor HOUSER and Mr. STROMSTEN.

Throughout the year. Lectures and laboratory work: Tu., Fri., 1:30 to 4:30.

ZOOLOGY

PROFESSOR NUTTING; ASSISTANT PROFESSOR WICKHAM.

1. INVERTEBRATED ANIMALS—More especially the subkingdoms, *Calenterata* and *Echinodermata*. Professor NUTTING and Assistant Professor WICKHAM.

Fall term, daily.

2. MAMMALIA—The principles of classification are here applied to a more limited group. More attention is paid to generic and specific characters, and more detailed descriptions are made, daily practice being afforded by the use of the large series of mammals in the Hornaday collection and main Museum. Instruction in the preparation of skulls and skeletons is given to students desiring it. Professor NUTTING and Assistant Professor WICKHAM.

Winter term, daily.

3. **ORNITHOLOGY**, including instruction in field work. Upon this course the whole work in systematic zoology is centered. Owing to the very large series of birds (about 11,000 specimens) in the Museum, there is ample material for systematic work during the term. Professor NUTTING and Assistant Professor WICKHAM.

Spring term, daily.

4. **ENTOMOLOGY**—Insect anatomy and development. Lectures and laboratory work. Assistant Professor WICKHAM.

Fall term, three hours a week.

5. **ENTOMOLOGY**—The principles acquired in the preceding term will be applied to the study of systematic entomology. Assistant Professor WICKHAM.

Winter term; three hours a week.

6. **ENTOMOLOGY**—The studies of the preceding term will be continued. Throughout this and the preceding course special attention will be given to the philosophical bearings of the subject. Assistant Professor WICKHAM.

Spring term; three hours a week.

7. **LECTURES ON SPECULATIVE ZOOLOGY**—This course is devoted to a presentation of the more prominent theories concerning the origin and development of animal forms and a historical review of the position held by the most prominent workers in speculative zoology. Special attention will also be paid to a study of the habits, instincts, and intelligence of animals. The course will be open to juniors and seniors. Professor NUTTING.

Throughout the year; two hours a week.

8. **THESIS**—Equivalent to two terms' work. Advanced work in any group of animals of which the Museum contains a sufficient series. Free access to any specimens or books on the Museum floor is accorded students doing thesis work in zoology, and a convenient study room has been fitted up for the use of advanced students.

The above courses are intended to be consecutive, except that courses 4, 5, and 6 may follow 1, 2, and 3 in animal morphology, and 7 may be taken by juniors and seniors without previous work in natural science. A combination of courses 4, 5, 6, and 7 is recommended for students desiring a five hours' course, which will include a critical study of a definite group of animals, together with the application of biological principles

elucidated in course 7. This course is more particularly designed in the interest of students who do not intend to specialize in zoology.

The Museum affords an abundance of material for study, and this is supplemented by (a) library of zoological works; (b) photographs of specimens studied, the photographs to be placed in the note books along with the descriptions; and (c) lectures in which the salient points of the various groups of animals are defined, and habits, distribution, etc., described.

Since the last calendar was issued a complete new equipment, consisting of improved microscopes, laboratory tables, etc., has been added for the use of students in this department.

Students taking special courses in zoological science may receive instruction in field work and in the preparation of museum material.

BOTANY

PROFESSOR MACBRIDE; ASSISTANT PROFESSOR SHIMEK.

A. COURSES OPEN TO UNDERGRADUATES ONLY

1. GENERAL BOTANY—A course of popular lectures and special studies intended to illustrate the purpose, method, and scope of present botanical research, the progress of botanical science in recent years, and the general economic importance of the subject. The lectures are illustrated by material from the herbarium and the field, and no effort is spared to give the course the highest practical value. This course, though intended primarily for those intending to teach, is open to all students; it is complete in itself, but will be accepted as one of the three required terms in the case of those who elect Botany as material science. Professor MACBRIDE.

A course of illustrated lectures, one every Monday evening, accompanies this course and course 5.

Spring term; five hours a week.

2. MORPHOLOGICAL BOTANY—This course consists of lectures and laboratory work and is intended to illustrate the structure and life-history of the several types presented by the vegetable kingdom. Goebel's *Outlines of Classification* is used as basis. Special attention is paid to all available forms of our cryptogamic flora; slime moulds, schizophytes, diatoms, algæ, fungi, mosses, ferns, and their allies are successfully passed in

review. This course is open to all students who have had course 1, and to all students who are credited with botany in their preparatory course. While it is in some particulars a review of the preparatory courses, it is also made the basis of work in the subsequent courses. Professor MACBRIDE and Assistant Professor SHIMEK.

Fall term; ten hours a week.

3. GENERAL PLANT HISTOLOGY—GENERAL STRUCTURAL BOTANY—This course requires ten hours a week in the laboratory. Daily lectures accompany the laboratory work. In this connection the student receives special instruction in the preparation of vegetable sections, staining, mounting, etc., and is required to prepare for himself approved slides in illustration of all the topics presented in so far as these are referable to the microscope. Professor MACBRIDE and Assistant Professor SHIMEK.

Illustrated lectures on Monday evenings accompany this course, beginning about February 1.

Winter term; ten hours a week.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

4. PHYSIOLOGY OF THE PLANT CELL—Two general topics are presented in this course: (a) the general physiology of the cell so far as this can be made a subject of microscopic investigation, the study of chlorophyl, photosynthesis, starch, the proteids, and the several by-products of vegetable metabolism; (b) the physiology of cell-division, the microscopic structure of cytoplasm, the nucleus, nuclear division especially as illustrated in the formation of spores, pollen, etc. Professor MACBRIDE and Assistant Professor SHIMEK.

Spring term; ten hours per week.

5. GENERAL PLANT PHYSIOLOGY AND ECOLOGY—In this course the most important problems of ecology in the broadest sense are discussed, and illustrated by field and laboratory work. The local flora, developed under the diversified conditions existing in the region about the University, furnishes abundant material for the illustration of the more important phases of modern ecology.

This course is especially recommended to those intending to teach. Assistant Professor SHIMEK.

Two hours per week during the year.

6. GENERAL MYCOLOGY—This is a course in the fungi and consists of laboratory work, supplemented by lectures, experiment, and collateral reading. It is an advanced course. Students make and classify collections for themselves. In identifying material collected, students are aided by extensive mycologic literature, *exsiccati*, etc. Professor MACBRIDE.

Fall term; daily as arranged.

7. VEGETABLE EMBRYOLOGY—A special laboratory course with collateral reading. This course is confined chiefly to the consideration of the embryology of phenogamous plants. Some plant is selected by the student and its whole life history traced. Professor MACBRIDE.

Throughout the year; daily as arranged.

8. SPECIAL SYSTEMATIC WORK—The large collections of the University now afford unusual opportunity for the special study of particular groups and families, and students are invited to engage in original research in the revision of accumulated species. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year.

9. SPECIAL APPLIED BOTANY—A course for students of pharmacy and medicine. The official *Materia Medica* is made the basis of the special study of medicinal plants, their nature, origin, and relationships. Professor MACBRIDE.

Winter and spring terms.

10. THESIS COURSE—Designed for such students, either graduate or others, as desire to undertake problems of original research. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year.

11. SEMINARY—A special course in reading and study of current literature is arranged for such students as have completed at least three courses in botany. Students are expected to prepare written reviews and criticisms of the literature presented, to engage in discussion of topics specially assigned, and to carry forward at appropriate seasons special investigations in the field as directed. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year; one hour a week, Monday evening.

GEOLOGY

PROFESSOR CALVIN AND MR. GEORGE.

A. COURSES OPEN TO UNDERGRADUATES ONLY

1. **PRINCIPLES OF GEOLOGY**—This course is designed to present the fundamental facts of geology for students who wish to become acquainted with the principles of the science without making a specialty of it. Lectures, illustrated with Museum specimens, views, maps, and microscopic preparations. Professor CALVIN.

This course may be supplemented by course 1 in astronomy. Throughout the year, twice a week; Tu., Th., at 9:00.

2. **ELEMENTARY MINERALOGY AND PETROLOGY**—This course will include a study of a few of the common economic minerals, and the application of easy determinative tests; the common rock-forming minerals and the common rocks. The aim of the course is a practical familiarity with common minerals and rocks, rather than a technical knowledge of them. Mr. GEORGE.

This course may serve as an introduction to course 5.

The first term, daily at 8:00.

3. **PHYSICAL AND DYNAMICAL GEOLOGY**—In this course the principles of general geology are discussed so far as relate to the destructive, constructive, and other dynamic forces which operate to bring about change on the earth's surface. Especial attention is given to the facts of rock-making, continent-making, and mountain-making, together with the evolution of the major and minor topographic forms of the North American continent. Large series of rocks, minerals, maps, lantern slides, photographs, and models afford the material for lecture illustration and laboratory study. Professor CALVIN.

Lectures and laboratory work daily, first term, at 10:00.

Students taking course 3 during the first term may elect between course 4 or course 5 for the second and third terms.

4. **HISTORICAL GEOLOGY**—In this course attention is given to the time periods and rock systems recognized by geologists, to the physical and physiographic conditions under which the successive rock strata of North America were deposited, and to the lithology, geographical distribution, economic products and typical faunas of the several formations, particularly those of the Mississippi Valley. Professor CALVIN.

Lectures and laboratory work daily, second and third terms, at 10:00.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

5. **ECONOMIC GEOLOGY**—The course is intended to give a practical knowledge of the geological products of the United States which are of economic importance. It will include:

(a). Metalliferous products, the nature and distribution of ore deposits, the sources and modes of deposition of ores, with special reference to the ores of iron, copper, lead, zinc, nickel, tin, manganese, silver, and gold.

(b). Non-metalliferous products, including coal, petroleum, natural gas, phosphates, gypsum, marls, cements, building stone, etc.; soils, fertilizers, and water supply. Mr. GEORGE.

Daily, second and third terms, at 10:00.

This course should be preceded by course 2 or course 3.

NOTE—This is primarily an undergraduate course, but may be taken by graduate students who have done a year's work in geology.

6. **PETROLOGY**—The course will include:

(a). Crystallography; a study of the properties of crystals, the process of crystallization and the crystal systems, with laboratory exercises using natural crystals, crystal models, and microscopic sections of crystals;

(b). Descriptive and determinative mineralogy of the rock-making minerals;

(c). The mineralogical and chemical composition of rocks, their origin, structural features, and classification.

The laboratory equipment for this course consists of carefully selected collections representing all the principal rock-making minerals, rock families, and rock types, together with several hundred thin sections for study with the microscope, and a number of the latest and best petrographical microscopes. Mr. GEORGE.

Through the year; daily, lectures and laboratory work, 1:30 to 3:30.

7. **INVERTEBRATE PALEONTOLOGY**—The course in Paleontology is designed primarily to give the student such acquaintance with fossil faunas as will enable him to determine the age of rocks containing recognizable organic remains. The principles of classification are studied, and the principal fossil types are carefully described from museum material or from specimens collected in the field. Professor CALVIN.

The course may be taken so as to count two, three, or five hours.

Through the year, at 8:00.

8. **GEOLOGY OF IOWA**—This course is offered to students who have had the equivalent of courses 3 and 4, or 3 and 5, and is intended for those who, for any reason, desire an intimate knowledge of the geology of the state. To count five hours for one, two, or three terms. Hours arranged to meet the convenience of students. Professor CALVIN.

9. **PETROLOGY**—Advanced work is offered to students who have taken a course in petrology. The work will consist in the careful study of the rocks of a selected region, and the preparation of a thesis on the same. The course may be taken so as to count two, three, or five hours through the year. Mr. GEORGE.

C. COURSES OPEN TO GRADUATES ONLY

10. **RESEARCH WORK IN PALEONTOLOGY**—This course may be taken as a major or a minor by candidates for graduate degrees. It may embrace such problems as the stratigraphic distribution of the fauna of a given geological formation, the critical study of certain selected geological faunas, the geographical and geological range of certain zoological groups of organisms, or the evidences of descent in successive geological faunas. Length of course, from one to three years. Professor CALVIN.

11. **FIELD WORK IN GEOLOGY**—This work may cover any one of a large range of subjects. For example, it may include the careful study of the indurated rocks of some selected area, making sections, correlating outcrops, mapping the geology, and writing a report. The study of Pleistocene geology in Iowa affords many interesting problems relative to the age and composition of the drift in different localities, the characteristics and origin of the crystalline bowlders, the origin and distribution of the loess and many other questions. The work may be directed by Professor CALVIN or MR. GEORGE.

12. **RESEARCH WORK IN ECONOMIC GEOLOGY, OR MINERALOGY**—The work in this course will depend largely on the previous preparation of the student. It may consist of detailed study of some geological field of economic importance, or of some mineral or group of minerals and the related industries. The credit given will depend upon the nature of the work and the time spent. Mr. GEORGE.

PHYSICS

PROFESSOR VEULEN; MR. LORENZ, MR. SIEG.

1. MECHANICS AND HEAT—Lectures and recitations. Professor VEULEN and Mr. SIEG.

Fall term; daily at 11:00.

2. ELECTRICITY AND MAGNETISM—Lectures and recitations. Professor VEULEN and Mr. SIEG.

Winter term; daily at 11:00.

3. SOUND AND LIGHT—Lectures three times a week, laboratory work twice a week. Professor VEULEN, Mr. LORENZ, and Mr. SIEG.

Spring term; lectures, Mon., Wed., Fri., at 11:00.

Courses 1, 2, and 3 constitute the general elementary work in physics required of all scientific and engineering students, and must be preceded by the mathematics of the freshman year.

4. PHYSICAL MEASUREMENTS AND OBSERVATIONS—Laboratory work. Mr. LORENZ.

One term, daily.

5. MEASUREMENTS AND DETERMINATION OF CONSTANTS—Lectures and laboratory work. Professor VEULEN and Mr. LORENZ.

One term, daily.

6. MEASUREMENTS—Special investigation and research to follow courses 4 and 5. Professor VEULEN and Mr. LORENZ.

Courses 4, 5, and 6 may be taken any term, but must be pursued in the order of their numbers. These courses are planned for students taking a second year in physics. Course 4 is required of electrical engineering students in the fall of their junior year. In the winter of the same year they take 5, but in their case this course deals more especially with electrical measurements.

7. DIRECT CURRENT DYNAMOS AND MOTORS—Three lectures a week, laboratory work twice a week. For electrical engineering juniors. Professor VEULEN and Mr. LORENZ.

Spring term, daily.

8. THEORY OF ELECTRICITY AND PHOTOMETRY—Lectures five times a week, laboratory work ten hours. Professor VEULEN and Mr. LORENZ.

Fall term.

9. **ALTERNATE CURRENT MACHINERY**—Five lectures a week, ten hours of special laboratory work. Professor **VEBLEN** and Mr. **LORENZ**.

10. **DISTRIBUTION OF ELECTRICAL ENERGY; TELEGRAPH AND TELEPHONE**—Lectures and laboratory work. Professor **VEBLEN** and Mr. **LORENZ**.

Spring term, ten hours a week.

The last three numbers form the senior year course of the electrical engineers, and will in general include five lectures a week, the subjects treated being indicated above. The work in the laboratory consists of practice with the photometer, experiments, and measurements on the various machines, transformers, and other apparatus, and tests of insulators, conductors, samples of iron, etc. The student has the choice in the latter part of the year of preparing a thesis or carrying out some research, or doing other special work.

11. **ELECTRICITY AND MAGNETISM**—For civil engineering students. Two lectures a week, laboratory work three times a week. Professor **VEBLEN** and Mr. **LORENZ**.

Fall term, daily.

12. **DYNAMO-ELECTRIC MACHINERY**—Lectures to civil engineering students. Professor **VEBLEN**.

Winter term, three times a week.

13. **HEAT AND THERMODYNAMICS**—Lectures to junior electrical and civil engineering students. Mr. **LORENZ**.

Spring term, twice a week, with one day each week in electrical laboratory for civil engineers.

14. **SHOP WORK**—For electrical engineers. Mr. **LORENZ**. Throughout the year; twice a week.

15. **SEMINARY**—The systematic reading of physical and electrical journals by those students who are well enough equipped, is encouraged by a weekly seminary, conducted for this purpose by Professor **VEBLEN**.

In addition to the above, lectures and laboratory courses in selected topics will be given as circumstances may require or the facilities for instruction may admit. Laboratory work of any grade may be taken any term, three or more times a week.

ELECTRICAL ENGINEERING

A comprehensive view of the course in electrical engineering is inserted here for the convenience of such as may be specially interested. The course is identical with those in

civil engineering and in science to the end of the freshman year; and it includes the requirements in military drill in the College of Liberal Arts.

English is taken twice a week through the freshman and sophomore years; and the foreign languages required are French and German, each pursued one full year, one in the freshman, the other in the sophomore year.

Three years of mathematics are required. The courses taken are described in the work offered by the department of mathematics, and include No. 2 (algebra, trigonometry, and theory of equation) No. 3 (analytical geometry and calculus) Nos. 10 and 11 (analytical and theoretical mechanics) and a course in differential equations.

The work taken in the department of civil engineering includes mechanical drawing three times a week through the freshman year, and draughting for two terms of the senior year, also the steam engine and strength and resistance of materials. These courses are fully described under the department of civil engineering.

For description of the required courses in chemistry, which occupy four full terms, the reader is referred to 1, 2, 3, and 8 under the department of chemistry. Course 8 is designed especially for electrical engineering students.

Sixty-eight term hours, or a good one-third of the work of the course, are taken in the department of physics. The sophomore courses, 1, 2, and 3 above, make up the course in general physics. Laboratory work is begun in the spring term. Laboratory work in general physics and electricity is emphasized in the junior year, in the fall and winter terms. One lecture is given each week on such subjects as the construction and action on measuring instruments, methods of measurement, sources of error, etc. In the spring term a course of two lectures a week (No. 13) is given on heat and thermodynamics, with special reference to the needs of engineering students. At the same time course 7 is pursued. It forms the beginning of the study of dynamo electric machinery, and deals especially with the theory, construction, and actions of the continuous current generator and motor.

The student is required to spend two to three hours twice a week, through the junior year, in shop work. The equipment of the shop of this department, as briefly stated elsewhere in the description of the physical laboratory, affords ample op-

portunity for exercises in forging, lathe work, and all the processes of a complete shop. Much time is also usually spent in the use of the tools and machinery of the shop during the senior year.

The senior courses (8, 9, 10) require thirty term hours, or two-thirds of the student's time. About half of this work is practical work in the laboratory. The courses include mathematical and graphical treatment of alternating current theory; the study of transformers, photometry; lectures, reading, recitations, and papers on the various problems of transmission and distribution of energy; telephones and telegraphs; problems in connection with the systems of wiring, arrangement of central stations, and the like. If it seems best the student may, as part of the work of this year, prepare a thesis, generally involving the design and construction of some piece of apparatus. The time given to each of the topics pursued and the order of presentation may vary according to the needs of different classes.

During his junior and senior years the student participates in the work of the seminary (course 15). This is designed to give him acquaintance with current physical and electrical literature, and encourage systematic and critical reading of the journals. The library of the department is full and varied and is easy of access.

It is hoped that this general statement, supplementing the outline of the "Course in Electrical Engineering," on page 63, will convey a just and adequate idea of the scope and character of the work in electrical engineering offered here.

For detailed statement see page 63.

CHEMISTRY

PROFESSOR ANDREWS; DR. VON ENDE, MR. BRINK.

1. GENERAL CHEMISTRY—Lectures illustrated by experiments and accompanied by a weekly quiz and laboratory work. Professor ANDREWS.

Fall term; four times a week, laboratory once a week.

2. GENERAL CHEMISTRY—(Continued). Lectures illustrated by experiments. Introduction to qualitative analysis. Laboratory work, six hours a week. Professor ANDREWS and Dr. VON ENDE.

Winter term; lectures, Tu., Th., at 9:00; laboratory at hours to be arranged.

3. GENERAL CHEMISTRY AND QUALITATIVE ANALYSIS—Lectures once a week, laboratory work eight hours. The student is instructed in the theory and practice of qualitative analysis and is expected to carry out about twenty-five complete analyses besides a number of partial ones. This course, except the lectures, can be taken in any term. Professor ANDREWS and Dr. VON ENDE.

Spring term; lectures at 9:00, laboratory eight hours, at times to be arranged.

4. QUANTITATIVE ANALYSIS—Lectures on general principles and sources of error, once a week, laboratory ten hours. Professor ANDREWS.

Winter term, in odd numbered years. Fall term, even numbered years.

Lectures, Tuesday at 4:30, laboratory, according to arrangement.

5. QUANTITATIVE ANALYSIS—Laboratory practicum. The student extends his work from the analysis of substances of definitely known composition to commercial products of various kinds and makes a study of certain technological methods. Professor ANDREWS.

Any term; ten hours a week.

6. THEORETICAL AND PHYSICAL CHEMISTRY—Lectures on the general principles of thermochemistry, electrochemistry, and chemical dynamics, accompanied by a parallel course of laboratory work covering, for example, the determination of molecular weights, experimental study of the laws of Avogadro and Dulong and Petit, the phenomena of mass action and of dissociation. Ostwald's *Outlines of Physical Chemistry* has hitherto been used as an auxiliary text. This course must be preceded by at least the first three courses in chemistry and the first three in physics or their equivalent. It will probably only be given in the even numbered years. Professor ANDREWS.

Spring term; lectures or laboratory work daily at hours to be arranged.

7. (a). ORGANIC CHEMISTRY—Lectures on the fatty series, illustrated experimentally, so far as the subject will permit. Professor ANDREWS.

Winter term; odd numbered years, twice a week,

7. (*b*). ORGANIC CHEMISTRY—Lectures on aromatic and heterocyclic compounds. Professor ANDREWS.

Spring term, odd numbered years, three times a week.

8. ELECTROCHEMISTRY—Lectures for students of electrical engineering, comprising the theory of electrolysis, chemistry of primary and secondary batteries, electrometallurgy and other industrial applications. Professor ANDREWS.

Spring term, even numbered years only, five times a week.

9. ORGANIC PREPARATIONS—Laboratory work comprising preparation of typical organic compounds, methods of synthesis, and study of reactions. This course must be preceded or accompanied by course 7. Professor ANDREWS.

Any term, laboratory daily, twelve laboratory hours a week. This course may also be taken as a minor, six hours a week in winter and spring terms, accompanying courses 7 (*a*) and 7 (*b*).

10. DETERMINATIVE MINERALOGY AND CRYSTALLOGRAPHY—Laboratory practicum. Dr. VON ENDE.

Winter and spring, five times a week.

Course 8, qualitative analysis, and 4 and 5, quantitative analysis, except as noted, and 9, organic preparations, may be taken in either fall, winter, or spring term.

Course 6 may be taken after 8. This order is only recommended to those who devote no more than four terms in all to chemistry.

MATHEMATICS

PROFESSOR WELD; ASSISTANT PROFESSOR SMITH, DR.

WESTFALL, MR. ———, MR. BECK.

Classical and philosophical students are required to take course 1. Course 2 may, however, be substituted for this and the work otherwise required in ancient history. Scientific students must take course 2. Engineering students are required to take courses 2, 3, and 10. Further explanations will be found in connection with the following syllabus, and in the current announcement of the Graduate College.

A. COURSES FOR UNDERGRADUATES

Freshman Mathematics for Classical and Philosophical Students.

1. (*a, b*). ALGEBRA—Exercises in the statement and solution of problems involving simple and quadratic equations; ratio, proportion, and variation; arithmetical, harmonic, and geometrical progressions; properties of series and the development of simple functions into series; the binomial theorem;

permutations and combinations; continued fractions; logarithms with applications. Fall term and first half of winter term.

(*b, c*). TRIGONOMETRY—Trigonometric functions and formulæ; logarithmic functions; solution of right and oblique angled triangles, both plane and spherical; practical applications to problems in surveying, navigation, geography, astronomy, and mensuration. Second half of winter term and spring term. Dr. WESTFALL or Mr. ———, Mr. BECK.

Throughout the year; Mon., Wed., Fri.; two divisions, G and H, at 11:00 and 1:30 respectively.

Freshman Mathematics for Scientific and Engineering Students.

*2. (*a*). ALGEBRA AND TRIGONOMETRY—In algebra the work is nearly the same as that of 1 (*a*).

Fall term.

(*b*). TRIGONOMETRY—The same as course 1 (*b, c*), with the addition of a discussion of Euler's and Demoivre's formulæ and the development of the trigonometric functions into series.

Winter term.

(*c*). THEORY OF EQUATIONS—The work in the theory of equations will include the study of imaginaries, the properties of the general equation and their graphical representation, methods of approximating to the roots of higher equations with numerical coefficients, Cardan's solution of cubics, and biquadratic equations. The rudiments of the theory of determinants are also presented.

Spring term.

Throughout the year, daily; five divisions, A, B, C, D, and E, at 8:00, 9:00, 10:00, 1:30, and 2:30. A sixth division, F, begins the same course at the opening of the winter term, reciting daily at 1:30. Assistant Professor SMITH, Dr. WESTFALL, Mr. ———, and Mr. BECK.

Sophomore Mathematics.

3. (*a*). ANALYTICAL GEOMETRY—The point, right line, parabola, circle, ellipse, and hyperbola in Cartesian co-ordinates; discussion of the general equation of the second degree; analytical geometry of three dimensions; higher plane curves, etc.

Fall term.

*This course will hereafter be subject to the "three-term rule." Students wishing a shorter course must take course 1.

(*b, c*). DIFFERENTIAL AND INTEGRAL CALCULUS—The fundamental principles of the calculus are studied and applied to the solution of problems in geometry, mechanics, etc.

Winter and spring terms.

Two divisions, A and B; daily, throughout the year, at 8:00 and 10:00. Assistant Professor SMITH and Dr. WESTFALL.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

4. (*a, b*) ADVANCED CALCULUS—A continuation of the work of the sophomore year, devoted particularly to such topics as the extension of Taylor's theorem, the theorems of Lagrange and Leibnitz, maxima and minima of functions of two or more variables, transformations of differential equations, variations, etc. Dr. WESTFALL.

Fall and winter terms; Mon., Wed., Fri., at 9:00.

(*c*) DIFFERENTIAL EQUATIONS—An elementary course devoted to the methods of solution of ordinary differential equations. Open to all students who have completed the elements of differential and integral calculus. Dr. WESTFALL.

Spring term; Mon., Wed., Fri., at 9:00.

5. (*a, b*) THEORY OF FUNCTIONS—Lectures, the work of Durege being used by the student for collateral reading. Professor WELD.

Fall and winter terms; Mon., Wed., at 11:00.

(*c*) DEFINITE INTEGRALS, including a discussion of the Beta and Gamma functions. Lectures. Professor WELD.

Spring term; Mon., Wed., at 11:00.

9. DETERMINANTS AND MODERN GEOMETRY—Determinants, the theory of quantics, the principle of invariance; modern analytic geometry of two and of three dimensions. Professor WELD.

Throughout the year; Tu., Th., at 8:00.

10. ANALYTICAL MECHANICS—*Statics*: Composition and resolution of forces, the funicular polygon, centers of gravity, moment of inertia, friction, etc. *Kinetics*: Rectilinear motion, projectiles, constrained motion of a particle, the pendulum, etc.

A course for engineering students, supplemented by a three hours' course in applied mechanics. (See the courses in civil engineering). Assistant Professor SMITH.

Throughout the year; Tu., Th., at 11:00.

11. **THEORETICAL MECHANICS**—Problems in statics and dynamics; virtual velocities; the principle of least action; the dynamics of a particle, with special reference to the theory of orbital motion; the potential theory, with special reference to attractions. Assistant Professor SMITH.

Throughout the year; Mon., Wed., Fri., at 11:00.

This course may not be given in 1901-1902.

13. (a) **THE METHOD OF LEAST SQUARES**, with numerous applications to the reduction of series of physical observations. Assistant Professor SMITH.

Fall term only; Mon., Wed., Fri., at 2:30.

14. (b) **THE THEORY OF SURFACES**, with problems. Dr. WESTFALL.

Winter term only; Mon., Wed., Fri., at 2:30.

15. (c) **QUATERNIONS**—Lectures and collateral reading. Professor WELD.

Spring term only; Mon., Wed., Fri., at 2:30.

16. **THE MATHEMATICAL SEMINAR** is conducted for the benefit of students making a special study of mathematics, and is open to all who have completed elementary calculus. The topics upon which papers are prepared under the direction of the several instructors are such as are suggested by the regular work of the various courses.

Throughout the year; Tu. or Th., 2:30 to 4:30.

THE LOWDEN MATHEMATICAL PRIZE

Competition for the Lowden Mathematical Prize of fifty dollars (\$50.00) for excellence in mathematics, established by Mr. Frank O. Lowden, of Chicago, is open to all students who are about to complete in course the work of the freshman and sophomore years in mathematics, the last three terms of such work to be done at this University in the regular classes.

The examination upon which the prize is to be awarded will be conducted by the professor of mathematics, and will be held in May, not later than the second Saturday preceding the opening of commencement week. Candidates should prepare for examination in the following subjects: Algebra, theory of equations; plane and spherical trigonometry; analytical geometry of two dimensions; the elements of differential and integral calculus.

The prize will be awarded by a committee, the members of which shall be the professors of mathematics, engineering, and

physics in the State University of Iowa, and two others to be appointed by the President of the University. It may be equally divided between not more than two candidates, or may be withheld if it shall appear that the work of no candidate is of a superior order of merit.

ASTRONOMY

PROFESSOR WELD.

The courses in astronomy are open to all sophomores, juniors, and seniors. The two here offered may be taken simultaneously or in succession. Others will be added as soon as necessary arrangements can be made. The University is provided with a small but well equipped students' observatory. (See *Material Equipment*).

1. GENERAL ASTRONOMY—A course of lectures on descriptive astronomy for the general student. This course may be supplemented by course 1 in geology, which is given at the same hour, on Tuesdays and Thursdays.

Three lectures a week, throughout the year; Mon., Wed., Fri., at 9:00.

2. PRACTICAL ASTRONOMY—The student is taught the use of the sextant, transit instrument, clock, chronograph, etc.; the arrangement of the *American Ephemeris and Nautical Almanac*; and the general principles of time, latitude, longitude, and azimuth determination.

Two hours a week, throughout the year; Tu., Th., at 9:00; supplemented by work at the observatory.

CIVIL ENGINEERING

PROFESSOR SIMS; ASSISTANT PROFESSOR MAGOWAN,
MR. WEEKS.

The civil engineering, electrical engineering, and general scientific courses are identical throughout the freshman year, and changes may be made from any one of these courses to another until the beginning of the sophomore year; but after this time no subjects can be substituted for the required civil engineering studies without the approval of the professor in charge, and special permission of the Faculty. Students in

one class will not be allowed to take subjects in an advanced class without permission of the professor in charge.

So far as possible instruction will be given by recitation from text-books. But where this method is not practicable, as in limes and cements, and in some of the subjects treated under the head of Civil Engineering, the first part of the recitation periods will be devoted to quizzes, and the remainder to lectures.

It is expected that the University will inaugurate a regular course in municipal and sanitary engineering, and it is intended that such changes in the civil engineering course will be arranged in the coming year as will permit students to specialize along this line.

Saturdays, throughout the last three years of the course, are devoted to work in the field, shop, and laboratories, in making surveys, testing materials, constructing models, photography, and blue-printing.

For all work requiring no special preparation outside of the class room, such as drawing, field work, laboratory exercises, some of the work in graphical statics, not less than two hours will be required for one hour of credit.

FRENCH OR GERMAN—See course 1, under French, page 78, and courses 1 and 2, under German, page 80. If French be elected in the freshman year, English must be taken in the sophomore year; but should German be elected in the freshman year it must be continued through the sophomore year.

Freshman year, five hours a week, and sophomore year, three hours a week.

MATHEMATICS—See courses 2, 3, and 10, under mathematics, pages 123 and 124.

ENGLISH—See courses 1 and 6, under English, page 85. For those electing French, two hours a week through the freshman, and three hours a week through the sophomore year; and for those electing German, two hours a week through the freshman year.

1. (*a, b, c*). **DRAWING**—For general scientific, electrical, and civil engineering students. The course comprises geometrical and mechanical drawing, oblique, isometric, cabinet, and orthographic projections and lettering. Linear perspective, shades and shadows. The work is given principally by

means of personal instruction. The preliminary principles are studied from text and reference books, and their application is employed in making drawings from models and machinery to exact scale. Mr. WEEKS.

2. LAND SURVEYING—For civil engineering students. The construction, adjustment, and use of the compass, level, and transit. Recitations and lectures, and field work with transit, level, and solar compass; making profiles, leveling, and drainage surveys. A section of land is surveyed and the location of all natural and artificial features determined and noted. Assistant Professor MAGOWAN and Mr. WEEKS.

Sophomore year, fall term; five hours a week.

3. MAPPING AND SURVEYING—Pen topography, including the making of topographical symbols; plating of section survey from notes taken during the previous term, and making a finished map of the same. United States public land surveys, determination of true meridians, and a study of the rules and Supreme Court decisions governing resurveys and relocations of lost or obliterated corners. Assistant Professor MAGOWAN and Mr. WEEKS.

4. TOPOGRAPHICAL SURVEYING AND MAPPING—A study of the adjustments and methods of use of the stadia, gradienter and plane table, etc., and the making of finished contour maps from notes of surveys made by the students, with above mentioned instruments. Assistant Professor MAGOWAN and Mr. WEEKS.

Sophomore year, spring term; three hours a week.

5. (*a, b*). DESCRIPTIVE GEOMETRY—The work in this study includes problems on the point, line, and plane; also the simple geometrical solids, shades, and shadows, single and double curved and warped surfaces, and the generation and development of the same, and the solution of various practical problems. Mr. WEEKS.

Sophomore year, winter and spring term; two hours a week

ELECTRICITY AND MAGNETISM—See course 11, under Physics, page 118. This course is designed especially for the students in civil engineering, the object being a better understanding of this important subject, both in general theory and in the practice of making electrical measurements; also to give a more thorough knowledge of electricity preparatory to taking up the study of the dynamo and motor in the winter term.

Junior year, fall term; five hours a week.

ANALYTICAL MECHANICS—See Mathematics, course 10, page 124.

Junior year, fall and winter terms; two hours a week.

6. (*a, b*). MECHANICS OF MATERIALS—For students in civil and electrical engineering. The treatment of this subject is designed to be such that the student shall acquire a thorough training in the elementary principles of the mechanics of materials, and he is then required to verify, by his own investigations, the experimental laws and many of the derived formulæ. Numerous problems taken from actual engineering practice are given for solution from time to time in order that the student may be trained in the application of his knowledge. The study includes the elasticity of materials, resistance of pipes and riveted joints, bending and resisting moments, shears, elastic curve, deflection of simple, cantilever, restrained, continuous beams, strength of columns with concentric and eccentric loading, torsion and shafting, and combined stresses, etc. Assistant Professor SMITH.

Junior year, fall and winter terms; three hours a week.

7. HYDRAULICS—Instruction in this work is given by means of lectures, recitations, and laboratory work. The course includes the weight and pressure of water; head and center of pressure; computation and measurement of velocity and discharge through orifices, weirs, pipes, conduits, canals, and rivers; the investigation of meters and motors, and the determination of water power. Assistant Professor MAGOWAN.

Junior year, spring term; five hours a week.

8. (*a, b, c*). GRAPHICAL STATICS—The course is so arranged that the study of the graphical method of determining stresses precedes that of the analytical method, it being the intention to assist the student to secure a mental photograph of the amount and kind of stress in the various members of structures, and thus provide him with a ready and impressive means of their comparison. The analysis, by this method, of roof trusses is first taken up, followed by that of the plate girder, and simple, cantilever, and swing bridges, with parallel and inclined chords, under various conditions of loading as required in the standard specifications, both for actual wheel concentrations and equivalent uniform loads, after which a course in metal and masonry arches is given. Professor SIMS.

Junior year, fall and winter terms, three times a week, and spring term, four times a week.

CHEMISTRY—See courses 1 and 2, under Chemistry; page 120.
Junior year, fall and winter terms, five hours a week.

DYNAMO-ELECTRIC MACHINERY—See Physics, course 12, page 118. The importance of an elementary knowledge of this subject to the civil engineer in general practice is fully appreciated, and the course is designed to give the students a comprehensive knowledge of the laws governing the construction and operation of the dynamo and motor.

Junior year; winter term, three hours a week.

9. (*a, b*). **THEORY OF STRESSES**—Including the analytical determination of stresses and strains in all the structures analyzed by the graphical method. See Graphical Statics. Much time and study are devoted to this important subject. Professor SIMS.

Junior year; winter term, three hours a week; and spring term, five hours a week.

HEAT AND THERMODYNAMICS—See course 13, under Physics, page 118.

10. **RAILROAD CURVES**—The study of simple and compound curves and turn-outs. Enough field work is given to familiarize the student with the field methods of locating and running curves. Assistant Professor MAGOWAN.

Senior year, fall term; three hours a week.

11. **STEAM ENGINE AND LOCOMOTIVE**—The subject is treated under four heads, Heat, Steam, Engine, and Boiler. Under Heat is treated the economic combustion of fuel; under Steam the physical properties and the energy contained; under Engine the modern types of simple and compound engines are discussed, with special reference to the locomotive. The students are given practical problems and are required to ascertain the indicated horse-power from actual indicator cards, and to determine the efficiency of various engines from assigned data. The modern types of boilers are then discussed. Compressed air is also considered in connection with the transmission of power. Professor SIMS.

Senior year, fall term; two hours a week.

12. (*a, b*). **SANITARY ENGINEERING**—The work offered under this course includes principally sewers and sewerage, and the cleaning of cities and towns. The separate and com-

bined systems of sewers are studied and discussed. The details of various sewer systems, as set forth in plans and specifications for their construction, are carefully studied. The cost of construction, as taken from current contract prices, is especially noted, and the arrangement and action of plumbing fixtures are incidentally studied. The growing importance of this subject is fully realized, and it is the intention to keep the instruction fully abreast of the demands and needs of the present, and, when possible, anticipate future needs and methods. Assistant Professor MAGOWAN.

Senior year, fall and winter terms; two hours a week.

13. (*a, b, c*). STRUCTURAL DESIGNING—Prior to the work of designing proper, the students are required to make tracings or drawings of existing structures and compare the sections and connections of the various members with standard specifications. This work is followed by the design of trestles, highway and railway bridges, dams, foundations, etc., of which complete working drawings are made. Professor SIMS.

Senior year, fall term; four hours a week: winter and spring terms; three times a week.

GEOLOGY—See course 1, under geology, page 114. Senior year, fall, winter, and spring terms; two hours a week.

14. (*a, b, c*). CIVIL ENGINEERING—This subject is given by recitations and lectures, and is designed for the purpose of instruction in the practical application of the theoretical principles of civil engineering. The regular recitations and lectures are frequently interrupted by designs and estimates of the cost of the work under discussion. The subjects are treated with thoroughness commensurate with their relative importance and are: railway reconnaissance and location; theory of a maximum economy in grades and curves; location of highways and resistance to traction thereon; hydrography; building materials; natural and artificial stones; quarrying and blasting; reaching deep foundation beds in earth, quick sand, water and silt, with pneumatic tubes, caissons and coffer dams, and by the Poetsch-Sooysmith freezing process; ordinary earth work and methods of computation; masonry, classification of and specification for; theory and practice of retaining walls; earth, loose rock, and light masonry dams and weirs; the construction of brick, masonry, and concrete arches; tunneling and the use of explosives; highway and street construction; railroad construction and maintenance of way; improvement of

rivers and harbors, and canal transportation; street railways and comparison of street railway motors. Professor SIMS.

Senior year, fall term; four times a week; winter and spring terms; three hours a week.

15. **RESISTANCE OF MATERIALS**—For civil and electrical engineers. This subject includes the strength, resistance, and properties of engineering materials, their behavior under stress, and the demonstration of the experimental laws, ultimate strength, elastic limit, resilience, etc., by tests in the laboratory. Professor SIMS.

Junior year, winter term; four hours a week.

16. **LIMES AND CEMENTS**—The instruction in this subject consists in assigned references, and a course of lectures on the principal properties of limes, hydraulic limes, and natural and artificial cements, with a general discussion of the nature and uses of concrete, followed by laboratory work. Each student is required to make and test briquettes of various cements, which will be furnished him for the purpose, and to calculate their relative value per unit of strength. Professor SIMS.

Senior year, winter term; two hours a week.

17. **LABORATORY**—This course includes instruction and practice in more advanced methods of testing and original investigation, selection and preparation of specimens, the influence of cross section on unit stress, under various conditions, the distribution of stress in the materials of construction, the determination of resistance, the construction of models of bridges and other structures. No attempt is made to attain special proficiency in the mechanic arts. Professor SIMS.

Senior year, winter and spring terms; three hours a week.

18. **WATER SUPPLY ENGINEERING**—A study of the methods of collecting, storing, and distributing water. Assistant Professor MAGOWAN.

Senior year, spring term; three hours a week.

19. **SPECIFICATIONS AND CONTRACTS**—A study of various standard specifications, and a discussion of the effect of general clauses in contracts of same. Professor SIMS.

Senior year, spring term; three times a week.

20. **THESIS**—At the close of the spring term of the senior year, an acceptable original thesis will be required from each student before graduation, unless equivalent work shall have been done on papers prepared for the Engineering Society.

For more detailed description of course, apply to the professor in charge, or send for special announcement of Civil Engineering course.

MILITARY SCIENCE AND TACTICS ·

GORDON F. HARKNESS, COMMANDANT.

Instruction in these branches is prescribed for all male students of the College of Liberal Arts, except such as are especially excused. Students who, for any valid reason, may desire to be excused, must appear in person before the military committee, consisting of the commandant and five student captains, on the first drill day of each term, at the Armory, at 4:30 p. m. Those claiming exemption on account of physical disability, when the same is not apparent, must present to the committee a certificate certifying to the same, from the battalion surgeon. Students desiring to be excused from military duty at the time of their entrance or at any future time, on the grounds of service in the Spanish-American War, or at some recognized military institution, must present their discharge papers or credentials at the time of matriculation. All students not specially excused will report to the instructor on the Monday immediately following the beginning of the term, at the Armory, at 4:30 p. m.

ORGANIZATION

The department is organized for instruction into an infantry battalion, consisting of four companies; a battery of artillery consisting of two gun detachments; a signal corps; a band; and the necessary staff officers. The commissioned officers are selected from the senior, the sergeants from the junior, and the corporals from the sophomore class. The officers and non-commissioned officers are selected for character, military record, knowledge of drill regulations, and general aptitude.

UNIFORM

The prescribed uniform, known as the undress or fatigue uniform, consists of a dark blue suit, and, with the regulation army hat and leggins, is worn on all occasions. During ceremonies the leggins are dispensed with, and the ordinary fatigue cap is substituted for the army hat. The above uniform can be procured either before or immediately after entrance. **A**

detailed description will be furnished on application to the President. Uniforms can be obtained in the vicinity at a cost of from \$13 to \$18.

**COURSES OF INSTRUCTION IN MILITARY SCIENCE AND
TACTICS**

The courses of instruction are both practical and theoretical:

FIRST YEAR—Practical instruction three hours a week, 4:30 to 5:30. Practical instruction in infantry drill, school of the soldier, company and battalion drill, ceremonies, extended order, and general battle formations.

Rifle firing on the University range at 100, 200, 300, 500, and 600 yards.

SECOND YEAR—Practical instruction; infantry, same as first year; artillery in service of field guns (foot battery), with mechanical movements and saber exercise; signal corps service and rifle firing, same as first year.

Theoretical: Winter term, one hour a week, 4:30 to 5:30.
Recitations: United States army drill regulations and guard duty.

THIRD YEAR—Practical, same as second year.

Theoretical: Service of security and information, including general instruction in the theory of outposts, reconnaissance, advance and rear guards, cavalry screen, and maneuvering of troops on the march and field of battle.

FOURTH YEAR—Officers' school; practical, same as third year.

Theoretical: General instruction in the maneuvering of troops, strategic operations, and the planning of campaigns
The work of the fourth year is optional.

ORGANIZATION OF BATTALION—1900-1901

Major, - - - - Gordon F. Harkness

STAFF AND NON-COMMISSIONED STAFF

First Lieutenant and Adjutant,	-	-	-	R. A. Cook
First Lieutenant and Quartermaster,	-	-	S. C. Williams	
Battalion Surgeon,	-	-	Dr. A. A. Knipe	
Inspector of Small Arms,	-	-	A. C. Lee	
Sergeant Major,	-	-	Merritt Brackett	
Quartermaster Sergeant,	-	-	R. J. Lynch	
Color Sergeant,	-	-	C. S. Macy	

COMPANY A

Captain,	- - - - -	C. C. Converse
First Lieutenant,	- - - - -	L. O. Rue
Second Lieutenant,	- - - - -	J. W. Miller
First Sergeant,	- - - - -	L. M. Butler
Sergeants,	- - - - -	R. G. Call
		A. R. Hoover
		P. S. Filer
		A. C. Clapp
Corporals,	- - - - -	A. K. Hess
		G. E. Hill
		H. M. Pratt
		O. Randall
		J. W. Fish

COMPANY B

Captain,	- - - - -	F. C. Drake
First Lieutenant,	- - - - -	W. P. McCulla
Second Lieutenant,	- - - - -	Otto Brackett
First Sergeant,	- - - - -	A. G. Remley
Sergeants,	- - - - -	R. C. Williamson
		R. J. Clearman
		H. J. Huntington
		Jesse Resser
Corporals,	- - - - -	Francis Nugent
		M. R. Charleton
		G. G. Hutchinson
		A. W. Lauer
		W. H. De Busk

COMPANY C

Captain,	- - - - -	G. W. Ball
First Lieutenant,	- - - - -	G. E. Remley
Second Lieutenant,	- - - - -	W. P. Coast
First Sergeant,	- - - - -	A. H. Storck
Sergeants,	- - - - -	H. S. Funson
		M. V. Boddy
		G. E. Dunkel
Corporals,	- - - - -	H. E. Spangler
		E. H. Mulock
		T. C. Doran
		J. G. Walsh
		F. V. Brose

COMPANY D

Captain,	- - - - -	Donald McClain
First Lieutenant,	- - - - -	Fletcher Briggs
Second Lieutenant,	- - - - -	W. O. Coast
First Sergeant,	- - - - -	F. G. Emry
Sergeants,	- - - - -	{ T. Casady C. L. Raguet J. F. Kirby E. A. Rule
Corporals,	- - - - -	{ W. C. Henry H. C. Watson F. Albert H. R. Barton S. H. Dykstra

BATTERY AND SIGNAL CORPS

Captain,	- - - - -	P. A. Bond
First Lieutenant,	- - - - -	H. S. Arnold
Second Lieutenant,	- - - - -	J. E. Gow
First Sergeant,	- - - - -	R. M. Anderson
Gunners,	- - - - -	{ H. E. Hadley W. L. DuBois

BAND

Director,	- - - - -	O. A. Kuck
Drum Major,	- - - - -	F. H. Luhman

BUGLE CORPS

Chief Trumpeter,	- - - - -	W. L. Baughn
Trumpeters,	- - - - -	{ J. W. Huebner B. Hunt E. Emmons



The Summer Session

JUNE 17—JULY 27, 1901

FACULTY OF INSTRUCTION

- GEORGE EDWIN MACLEAN, PH. D., LL. D.,
President.
- THOMAS HUSTON MACBRIDE, M. A., PH. D.,
Professor of Botany.
- LAUNCELOT WINCHESTER ANDREWS, PH. D.,
Professor of Chemistry.
- CHARLES BUNDY WILSON, M. A.,
Professor of German Language and Literature, and Secretary of the
Faculty.
- ANDREW ANDERSON VELEN, M. A.,
Professor of Physics.
- LAENAS GIFFORD WELD, M. A.,
Professor of Mathematics.
- CHARLES CLEVELAND NUTTING, M. A.,
Professor of Zoology.
- ISAAC ALTHAUS LOOS, M. A., D. C. L.,
Professor of Political Science.
- JOSEPH JASPER MCCONNELL, M. A.,
Professor of Pedagogy, and Dean of the Summer Session.
- WILLIAM CRAIG WILSON, M. A.,
Professor of History.
- FREDERIC C. L. VAN STEENDEREN, M. A.,
Professor of French Language and Literature.
- HENRY EVARTS GORDON, B. A.,
Professor of Public Speaking.
- BOHUMIL SHIMEK, C. E.,
Assistant Professor of Botany and Curator of the Herbarium.
- HENRY F. WICKHAM, M. S.,
Assistant Professor of Zoology.
- FRANKLIN HAZEN POTTER, M. A.,
Assistant Professor of Latin.
- CARL EMIL SEASHORE, PH. D.,
Assistant Professor of Philosophy.

ALICE YOUNG, M. L.,

Assistant Professor of English, and Dean of Women.

LOUISE ELIZABETH HUGHES, M. A.,

Instructor in Latin.

CARL VON ENDE, PH. D.,

Instructor in Chemistry.

SUMMER SESSION COMMITTEE

PROFESSORS McCONNELL, ANDREWS, NUTTING, LOOS,
CALL, AND ANSLEY.

GENERAL INFORMATION

PURPOSE OF THE SUMMER SESSION

The summer session of the University is the outgrowth of a desire upon the part of the Board of Regents to enlarge the capacity of the University for rendering service to the people of the state.

In maintaining this department of work the Board of Regents has in view three classes of students :

1. Superintendents, high school teachers, and teachers in the higher grammar grades of the schools of the state;
2. Undergraduate College and University students;
3. Graduate students and others who may wish to take up special research work.

The University is a part of the public school system of the state, and it is believed by the Board of Regents and the faculties that it can increase the usefulness to the other parts of the system by opening its doors to the teachers of the various grades and departments of the public schools at a time when they are released from their regular work. It can in this way bring them into a vital connection with the work and spirit of higher learning, affording them an opportunity to add to their preparation for their work, by taking advanced courses of instruction on the subjects which they teach, and also affording them an opportunity to devote a part of their vacation time to a study of the theoretical and practical problems of education.

The courses of instruction have been planned with special reference to the wants of those doing, or expecting to do, work in high schools. Due attention will therefore be given to the subjects of the high school curriculum, both in regard to subject matter and methods of teaching. Advanced courses in the subjects represented in the high school curriculum will be offered, as it is believed that the high school teacher needs and desires to know much more of the subjects than he is actually required to teach.

Many teachers in the public schools desire to secure permanent and general licenses to teach in the public schools of the state, as these licenses are represented by the certificates and diplomas issued by the State Board of Educational Examiners. At the summer session the University will offer instruction in most of the branches in which teachers seeking these certificates and diplomas will be examined by the State Board, and special attention will be given to the wants of such teachers as desire to finish their preparation for the examination to be given by the State Board. While the primary purpose of the summer session is, as above indicated, to render a valuable service to the teachers of the state, it is distinctly borne in mind that many University students, especially those who have been unable to carry on consecutive work in the University, may find an opportunity to supplement the work of the regular collegiate year in such a way as to enable them to make substantial progress in their University courses.

It is also thought that some persons intending to enter the University may be able to take advantage of the summer session to complete the requirements for admission to the regular University courses.

The various departments of the University in which courses are offered will be open to advanced students who may wish to employ a part of their vacation time in special research work, and it will be the aim of the faculty to provide especially for the wants of this class of students.

ADMISSION

All students seeking credit in the University will be expected to meet the requirements for admission as stated in the Annual Calendar.

All other applicants for admission to the summer session will be permitted to schedule for such work as, in the judgment of the professors concerned, they may be able to pursue to advantage.

UNIVERSITY CREDIT

1. Credit will be allowed for courses in any subject of collegiate grade amounting to not less than two term hours, and for shorter courses when, in the judgment of the faculty, the

work is such as to form a part of other work for which credit is allowed.

2. Credit will be allowed in any specific subject upon the approval of the professor in charge of that subject in the University.

3. Credit cannot be allowed to any student whose schedule shall exceed twenty hours per week.

4. Students receiving credits must have complied with the requirements for admission to the University.

5. Credit will not be allowed for duplicated work.

Ample opportunity will be afforded students to schedule for work leading either to University or to preparatory credit.

GENERAL LECTURES AND ROUND TABLE MEETINGS

Saturday morning of each week will be devoted to general lectures and to the weekly chapel exercise.

A definite programme of lectures to be given on Saturday mornings will be announced at the opening of the session.

Round table meetings for the discussion of various topics of interest to educators will be organized by those in attendance upon the session, as circumstances may suggest.

There will be opportunities to listen to addresses by eminent educators from other institutions.

EXAMINATION

In the special interest of those students who may wish to secure state certificates or state diplomas, the State Board of Educational Examiners will hold an examination at the University on July 26-27, 1901.

EXPENSES

The tuition fee in the summer session is five dollars. This fee covers all dues to the University except the charge for private lessons in public speaking, which will be a matter of agreement between the student and the professor in charge.

There are no dormitories and no commons connected with the University. Clubs may be formed, in which the cost of day board is from \$2.00 to \$2.50 per week. Room rent varies

from 50 cents to \$1.50 per week for each student. Boarding and lodging in private houses can be obtained for from \$3 to \$5 per week.

Inquiries regarding rooms and board may be made of the Secretary of the Young Men's Christian Association.

REGISTRATION

Students on coming to the University should present themselves at the office of the dean of the summer session, Clinton Street Building, second story, for registration and assignment to classes.

Office hours of the dean of the summer session, 2 to 3 p. m.

Office hours of the President of the University, 11 a. m. to 12:15 p. m.

Any further information desired may be obtained by addressing the President of the University, or the dean of the summer session, at Iowa City, Iowa.

THE COURSES OF INSTRUCTION

LATIN

ASSISTANT PROFESSOR POTTER; MISS HUGHES.

1. **CÆSAR**—A course for students who have studied Latin from one to three years. The selections to be read will be taken from the Fifth, Sixth, and Seventh Books of the Gallic war. Five hours a week. Preparatory credit according to work done. Miss HUGHES.

2. **LATIN COMPOSITION**—A course to be given in the interest of students whose preparation for college has been deficient in Latin composition, and of any others who would like to avail themselves of an opportunity for a systematic study of Latin syntax and idioms. Five hours a week. Credit two and a half term hours. Miss HUGHES.

3. **VERGIL, ÆNEID, BOOKS VII-XII**—A reading course open to students who have completed their preparatory course in Latin. Five hours a week. Credit two and a half term hours. Miss HUGHES.

4. **SYNTAX OF THE LATIN VERB**—The course will be based on Buck and Hale's forthcoming Latin Grammar, with practical work on the moods and tenses in Cicero's orations. Five hours a week. Credit three term hours. Assistant Professor POTTER.

5. **TEACHERS' COURSE**—A series of lectures and free conferences—Wednesday, 4:30. No credit. Assistant Professor POTTER.

6. Four illustrated lectures on the archæology and topography of Rome and Italy. Dates to be announced later. No University credit is given. Assistant Professor POTTER.

GREEK

ASSISTANT PROFESSOR POTTER.

1. **BEGINNING GREEK**—Students taking this course will be expected to devote at least two-thirds of their time to it.

2. XENOPHON, ŒCONOMICUS—A course for students who have had some Greek. Five hours a week. Credit three term hours.

Only one course in Greek will be given. Students intending to take either course should notify Assistant Professor Potter before June 1, after which notice will be given as to which course will be offered.

GERMAN LANGUAGE AND LITERATURE

PROFESSOR WILSON.

1. COURSE IN METHODS—Review of grammar to show methods of presenting topics to classes. Discussion of the report of the committee of twelve of the Modern Language Association of America. This course is intended primarily for teachers who already have a fair knowledge of the language, and is not open to students who have not studied German. It is conducted in English. No University credit is given. Five hours a week; room 6, Old Capitol.

2. GERMAN DRAMA—Freitag's *Die Journalisten* will be read in 1901. Open to students who have studied German at least one year. The course is conducted in German and English, and should be taken in connection with course 3. Credit two term hours. Mondays, Wednesdays, and Fridays; room 6, Old Capitol.

3. GERMAN COMPOSITION AND CONVERSATION—The purpose of this course is to give such persons as already have a fair acquaintance with German some practice in composition and conversation. The work will be carried on entirely in German. It is expected that this course will be taken in connection with course 2. Credit one term hour. Tuesdays and Thursdays; room 6, Old Capitol.

4. MIDDLE HIGH GERMAN—This is a course for advanced and graduate students. It includes a rapid survey of Middle High German forms, a comparative study of Middle High German and New High German syntax. Paul's *Mittelhochdeutsche Grammatik* is used as a guide. The material read is selected from Bachmann's *Mittelhochdeutsches Lesebuch*. The amount of credit will be determined in each case by the work done by the student. The class will meet regularly Tuesdays and Thursdays, but individual meetings may be arranged by appointment. Room 6, Old Capitol.

FRENCH LANGUAGE AND LITERATURE

PROFESSOR VAN STEENDEREN.

1. A third term course, intended primarily for those students who began their first term of French in the winter term of 1901. It is open also for those teachers and others who, having had the work offered in this course and having been regularly admitted to the summer session, desire to review their grammar and reading. These latter will receive no credit on the books of the University.

Daily, two hours a day. Credit five term hours.

2. READINGS—*Le Cid*, *Le Misanthrope*, *Athalie*. Mon., Wed., Fri. Credit one and a half term hours.

3. READINGS—*Les Miserables*, Selections from Alphonse Daudet. Lectures on literary movements in the nineteenth century. Tu., Thu. Credit one hour.

ENGLISH

ASSISTANT PROFESSOR ALICE YOUNG.

1. THE TEACHING OF ENGLISH IN THE COMMON SCHOOLS—This course this year will be adapted to the needs of high school teachers of English. It will consist of lectures upon the teaching of English in general and upon the arrangement of a high school course of study. It will take up in detail some of the specimens of literature which are usually studied in high schools. It will also discuss the question of the home reading of high school pupils, using as a basis the model school library at the University. Five hours a week. Credit three term hours.

2. CHAUCER—This will be an outline of Chaucer's life and work with a detailed study of one or more of his poems, probably the "Prologue" and one of the "Canterbury Tales." This will be regular University work. Five hours a week. Credit three term hours.

MATHEMATICS AND ASTRONOMY

PROFESSOR WELD.

The following courses in mathematics are arranged with special reference to the needs of teachers preparing to take

examinations for state certificates or diplomas and of students seeking entrance to the University or desiring to earn credit in elementary mathematics.

The first three courses (Algebra and Geometry) being required for admission, no credit can be given for these courses except as preparatory work. In course 4 (Trigonometry) the ground to be covered is, so far as possible, substantially the same as in the corresponding course in the University curriculum and due credit will be given for the work completed.

Each course will conclude with a written examination.

1. **ALGEBRA**—This will be essentially a teachers' course, both subject matter and methods of presentation being given careful attention. The theories of the minus sign and of the exponent will be considered at the outset. Drill work in the fundamental operations will be given, especially in factoring. The simple equation of the first degree will next be studied and geometrically interpreted, after which the quadratic equation will be treated in a similar manner. Attention will also be given to systems of simultaneous equations. This course will include a study of imaginary expressions and their interpretation. Three hours a week.

2. **PLANE GEOMETRY**—This course will be presented with due reference to methods of instruction. The so-called heuristic, laboratory, and other methods of teaching geometry will be discussed and illustrated. At the same time the work will be so conducted as to enable the student to obtain a comprehensive view of the subject. Especial notice will be taken of the needs of those intending to pass the examinations for state diplomas or for admission to the University. Two hours a week.

3. **SOLID GEOMETRY**—Those deficient in solid geometry and who intend to enter the University in the near future will be given an opportunity to make up this requirement for admission to full freshman standing. Two hours a week.

4. **TRIGONOMETRY**—The course will be limited to plane trigonometry, and can be taken only by those having a good knowledge of geometry and algebra. The subject will be studied with special reference to its practical applications to surveying, navigation, mensuration, etc. Credit one term hour. Two hours a week.

5. **HIGHER MATHEMATICS**—A course in some branch of higher mathematics will be given, provided a sufficient number

of properly qualified students present themselves for such work.

In any case the professor of mathematics will give liberally of his time and services to those wishing direction in any of the lines of study coming within the scope of his department.

Three hours a week. Special appointments will be made with individuals.

6. **ASTRONOMY**—It is expected that a series of Saturday lectures will be given on some of the principal topics of astronomy. These will be supplemented by the exhibition of the large series of lantern slides belonging to the department, and by visits to the observatory, where many of the more interesting celestial objects may be located and studied with the aid of the telescope.

HISTORY

PROFESSOR WILCOX.

1. **THE FRENCH REVOLUTION**—This course will be a series of lectures on the European movements which centered in France from the meeting of the States-General in May, 1789, to the political triumph of Napoleon Bonaparte in overthrowing the Directory in November, 1799. Students who intend to take this course are urged to acquaint themselves beforehand as thoroughly as possible with the outline facts of the French Revolution. Credit three term hours. Five hours a week.

2. **THE HISTORY OF THE UNITED STATES FROM THE INCEPTION OF THE GOVERNMENT IN 1789 TO THE WHIG TRIUMPH IN 1840**—This is a course of lectures covering the period designated above, and is intended for teachers of United States history and students who desire to specialize in this subject. Credit three term hours. Five hours a week.

3. **OUTLINE HISTORY OF THE UNITED STATES**—This work is specially designed for those persons who desire to prepare themselves for state certificates or state diplomas. Topical outlines based upon some half dozen of the leading text-books will form the foundation of the work. No University credit will be given for this course, as the work will not be of collegiate grade. Five hours a week.

4. A course of five lectures on the Critical Points in American History will be given on the Saturday mornings of the

summer session. These lectures are open to all who may wish to attend. They are accompanied by full printed syllabi and reference lists, but no credit is given and no schedule cards are required. Five weeks, one hour a week.

ECONOMICS AND SOCIOLOGY

PROFESSOR LOOS.

ECONOMICS 3—Lectures, with assigned readings. Order of topics: the nature, scope, and fundamental concepts of economic science; the organization of modern industry; money and credit, wages and profits; tradesunionism, labor legislation, and the trust problem. Five hours a week.

SOCIOLOGY 1—Lectures, with assigned readings. A study of the primary factors and forces of social phenomena with introductory lectures on anthropology and ethnology. Credit two and a half term hours. Five hours a week.

SOCIOLOGY 6—A research course, open to graduates only. "The Monograph of the Community" will form the subject of inquiry. Amount of credit to be determined at the end of the term. Two hours; to be arranged.

PSYCHOLOGY

ASSISTANT PROFESSOR SEASHORE.

1. INTRODUCTION TO PSYCHOLOGY—This is a preparation for all other courses in the department of psychology. It is essentially the first term's work in the standing course (4) in general psychology, and may be completed by taking the winter and spring terms of that course, or their equivalent, which will be offered for next year's summer session. The lectures are fully illustrated by material from the psychological laboratory. The aim is to use the laboratory to the best advantage for teachers who can take only a short course in psychology. Credit two and a half term hours. Five hours a week.

2. LABORATORY COURSE IN EXPERIMENTAL PSYCHOLOGY—The exercises are so arranged as to familiarize the student with the method, the apparatus, and the results of typical experiments in each of the approved lines of psychological research. Two periods are spent on each problem. During the first the experiment is performed by each individual, the

class being divided into groups of two. During the second the results and the literature on the subject are discussed on the seminar plan. The manual of the course is furnished in mimeograph copies. This course may be taken in connection with, or in sequence to, course 1. Credit two and a half term hours. Five hours a week.

3. SPECIAL RESEARCH IN PSYCHOLOGY—Original investigation of special problems in psychology. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *University of Iowa Studies in Psychology*. This course is primarily for graduate students, but may be taken by undergraduates who have had courses 1 and 2 or their equivalent.

In this course special attention may be given to preparation for the experimental study of school children.

PEDAGOGY

PROFESSOR MCCONNELL.

1. THE PHILOSOPHY OF EDUCATION—It is the purpose in this course to present by exposition the educational doctrines and theories that have become effective in determining the course of school practice, also to discuss other doctrines and theories that give promise of bringing about some modification of commonly accepted ideas of teaching. It will be necessary in this connection to discuss to some extent the aims of education and the laws upon which the child's development depends, and to devote some time to the application of the laws of development to the selection and arrangement of the materials of instruction. The course is open to all teachers and to University students who have taken a course in general psychology. Five hours a week. Credit two and a half term hours.

2. THE HIGH SCHOOL—It is the purpose in this course to treat the following topics:

(1). The function of the public high school, including its special function as a college preparatory school.

(2). The curriculum of the high school, with special reference to the selection and arrangement of suitable subjects of instruction.

(3). High school management and teaching.

Five hours a week. Credit two and a half term hours.

3. GRADED SCHOOL MANAGEMENT—This course will include a discussion of the ordinary problems of school supervision. Some time will be given to the problems of classification and organization as these problems arise in the village school. Two hours a week. Credit one term hour.

BOTANY

PROFESSOR MACBRIDE.

Three courses in botanical research are offered, as follows:

1. The study of types illustrating those natural orders of flowering plants which are most widely represented throughout the state.

The study of types representing the several groups or divisions of so-called cryptogamous plants, especially as illustrated by forms everywhere easily accessible.

Each plant studied will be presented in such manner as to bring out as far as practicable the various methods of modern botanical research, special attention being paid to various problems in plant ecology, physiology, habit, distribution, etc. This course is intended especially for teachers of elementary botany. Four hours a week. This course is supplemented by evening lectures, one a week, requiring an additional hour. Credit two and a half term hours.

2. A course in vegetable morphology and histology. The morphology of the vegetable cell will be taken up, and its modifications in the formation of the various tissues and structures of the higher plants will be considered and illustrated in the general laboratory.

So far as possible the students will be taught the more common methods of preparing, sectioning, staining, and mounting the various objects used in illustration. Credit two and a half hours. Five hours a week.

3. Special Histology and Embryology. A special laboratory course in more advanced microscopic research, including the investigation of nuclear division, the egg-apparatus of flowering plants, etc. This course is intended only for those who have had considerable experience in microscopic work. Credit two and a half term hours. Five hours a week.

Students will be advised against entering courses for which they may lack the necessary previous training.

ZOOLOGY

PROFESSOR NUTTING; ASSISTANT PROFESSOR WICKHAM.

1. **GENERAL ZOOLOGY**—A number of typical invertebrata will be studied, including paramecium, hydroid, jellyfish, coral, sea fan, star fish, sea urchin, earth worm, tube-dwelling worm, cray fish, crab, and grasshopper.

The zoological relationship of each of these forms will be discussed and the outlines of classification given. One hour a week will be devoted to a lecture in which general biological principles will be discussed and additional information concerning special groups of animals will be presented. This will be essentially a laboratory course, for which ample material will be available from the Museum of Natural History. Five hours a week. Credit two and a half term hours. Professor NUTTING and Assistant Professor WICKHAM.

2. **ÆTOLOGY**—In this course an attempt is made to explain some of the phenomena associated with animal life. This necessitates a discussion of some fundamental problems of biology that confront every thoughtful person, be he teacher or student. Some or all of the following topics will be discussed: Natural selection, heredity, variation, ratio of increase, geological and geographical distribution (including migration), rudimentary organs, and coloration of animals. This will be a lecture course supplemented by reading and illustrated by the collections in the Museum. Five hours a week. Credit two and a half term hours. Professor NUTTING.

3. **ENTOMOLOGY**—This will be an elementary course. Starting with a review of the external and internal anatomy of some common insect, we shall proceed to examine representatives of the principal orders as far as time will permit. Due attention will be given the economic side of the subject, though this is not the primary object in view. A few days may be devoted to a study of entomological problems of a philosophical character. Five hours a week. Credit two and a half term hours. Assistant Professor WICKHAM.

Each of these courses is intended to be useful to teachers. No. 1 is recommended to those who desire a general introductory course; No. 2 to those who desire to understand what may be called the theory of zoology; and No. 3 to those who wish to undertake a more thorough study of a single class of animals.

CHEMISTRY

PROFESSOR ANDREWS; DR. VON ENDE.

1. THE ELEMENTS OF CHEMISTRY—This is an introductory course, comprising experimental lectures and laboratory work. Five hours a week. Professor ANDREWS and Dr. VON ENDE.

2. PRINCIPLES OF ANALYSIS—This course is intended to give some idea of the entire field of chemical analysis, qualitative and quantitative. A few selected topics from the various branches of the subject are taken for study in the laboratory. The course presupposes a knowledge of the elements of chemistry. The oral instruction is entirely subsidiary to this *practicum*. Three hours a week. Credit one and a half term hours. Professor ANDREWS.

2. DETERMINATIVE MINERALOGY—A study of the art of recognizing minerals by their physical and blowpipe characters. The elements of crystallography will be given. Laboratory *practicum* equivalent to three hours a week. Credit one and a half term hours. Dr. VON ENDE.

PHYSICS

PROFESSOR VEBLEN.

1. ELECTRICITY—This course will consist of lectures and recitations on the principal facts and laws of electricity, magnetism being treated so far as it has any bearing on the subject of the course. The lectures will be illustrated by experiments, and demonstrations will be introduced where such aids will make the subject clearer. Ample references for reading will be given from time to time. Candidates for this course should have a good working knowledge of algebra and geometry, and, if possible, some acquaintance with trigonometry. Five hours a week. Credit two and a half term hours.

2. LABORATORY WORK—The work in the laboratory being entirely individual, students of various degrees of advancement can be accommodated. It is required, for admission to laboratory courses, that the candidate should have at least a good elementary preparation in physics. Students who have had work equivalent to the first year's course in physics in the University, may obtain University credit for laboratory work pursued for not less than ten hours a week during the session.

For teachers the laboratory work can be arranged to meet individual needs, such as gaining familiarity with particular pieces of apparatus, or carrying out special lines of experimentation.

The instruction in the laboratory will be given from 8:00 to 10:00 o'clock each morning, except Saturday; and it is expected that each student will work during two consecutive hours upon each exercise. Courses of three, four, or five exercises a week may be arranged. Amount of credit to be determined at the end of the term.

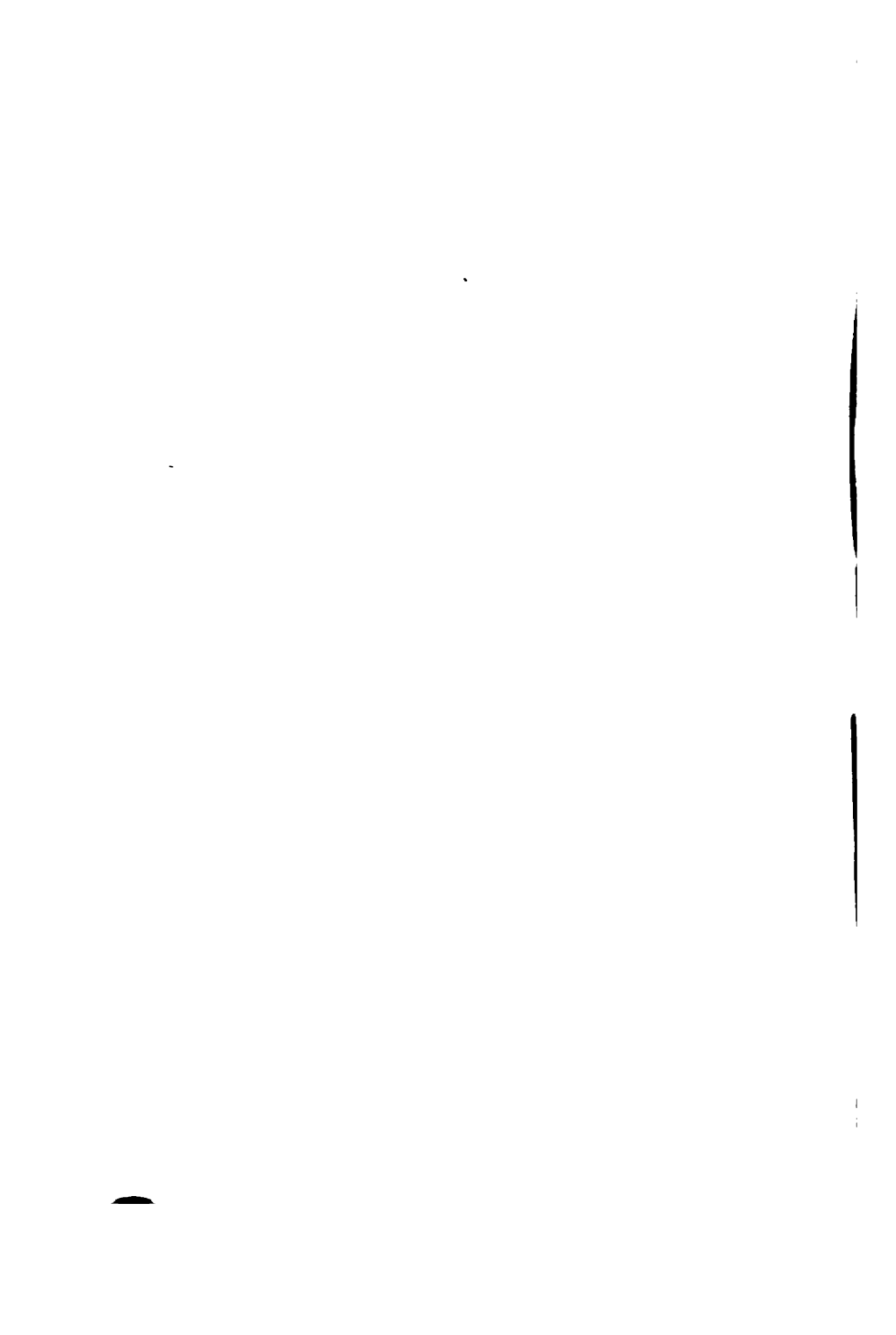
PUBLIC SPEAKING

PROFESSOR GORDON.

VOCAL TRAINING AND EXPRESSION—One course only will be offered. This will be especially adapted to the needs of teachers and others who desire elementary work in voice and body training and expression. Methods of teaching reading and vocal culture will be considered. The nature and growth of children's voices will be shown by practical work before the class. The whole work will be adapted to the needs of the individual members of the classes. Students desiring advanced work can arrange with Professor Gordon for private lessons on such terms as may be agreed upon.

Summer School for Library Training

**A DEPARTMENT OF THE SUMMER SESSION, UNDER THE
AUSPICES OF THE IOWA STATE LIBRARY COMMISSION**



FACULTY OF INSTRUCTION

GEORGE E. MACLEAN, PH. D., LL. D., President and Lecturer on Library Subjects.

ALICE S. TYLER, Director and Lecturer on Library Subjects.

ESTHER CRAWFORD, Instructor.

_____, Reviser.

JOHNSON BRIGHAM, Lecturer on Library Subjects.

BERTHA G. RIDGWAY, Lecturer on Government Publications.

IOWA STATE LIBRARY COMMISSION

MEMBERS OF THE COMMISSION *Ex-Officiis*

JOHNSON BRIGHAM, State Librarian,
President.

ROBERT C. BARRETT,
State Superintendent of Public Instruction.

GEORGE E. MACLEAN,
President of the State University.

MEMBERS OF THE COMMISSION BY APPOINTMENT

MRS. HARRIET C. TOWNER, Corning.

MISS JESSIE B. WAITE, Burlington.

MRS. LIZZIE S. NORRIS, Grinnell.

HON. W. H. JOHNSTON, Ft. Dodge.

ALICE S. TYLER,
Secretary of the Commission.

OBJECT

This course is intended for the librarians of the smaller libraries, and for those definitely appointed to library positions, who wish to prepare for their work. It is in no sense a substitute for the full course of one of the library schools, but is given for those who feel their lack of knowledge of modern library methods and have not the time or means to attend a library school. By securing a leave of absence for six weeks they can, in a brief, systematic course, such as is planned, gain a broader view of the work as a whole. The aim will be to give as thorough a course of technical library training as can be compressed into six weeks of close work. In all cases where the subject admits, instruction will be accompanied by practice work, which will be carefully revised and criticised.

It is hoped that the course will be of special value and interest to Iowa librarians, and particular attention will be given to problems that may be suggested by conditions in our own state.

SUBJECTS

The following subjects will be included in the lectures given during the course:

- Note-taking,
- Library hand,
- Alphabeting,
- Statistics,
- Order department,
- Book buying,
- Trade bibliography,
- Duplicates and gifts,
- Mechanical preparation of books,
- Accessioning,
- Shelf list,
- Classification,
- Author numbers,
- Cataloging,
- Printed finding lists,
- Serials,
- Contact with the public,
- Loan systems,

Children's work,
Reference work,
Reading lists,
Library arrangement,
Libraries and schools,
Government service,
Library spirit—purpose and aim of the library,
Library legislation.

INSTRUCTORS

The school will be under the direction of the Secretary of the Iowa State Library Commission, Miss Alice S. Tyler, formerly of the Cleveland (Ohio) Public Library.

A competent and trained instructor will give the daily lectures on technical subjects, assisted by a skilled reviser. The appointment of the instructor and reviser will be announced at an early date.

The Library of the University, comprising about 57,000 volumes, and the Public Library of Iowa City, comprising about 4,000 volumes, will be at the service of the students, affording ample practice work.

LECTURERS

Lectures will be given during the course by members of the Faculty of the State University and members of the Library Commission. Dr. George E. MacLean, President of the State University, and a member of the Library Commission, and Honorable Johnson Brigham, State Librarian, and President of the Library Commission, are expected to lecture on some of the larger phases of library work.

Mrs. Ridgway, Librarian of the State University, will lecture on government publications, and the handling of the same and on other topics with which her experience as University Librarian has made her familiar. Other prominent librarians may be heard during the course on themes of especial interest. A course of ten lectures of a general character on library subjects will be given by members of the faculty of the school for library training, to which all members of the summer session will be admitted.

The American Library Association will meet in Waukesha, Wisconsin, July 8-10, 1901, and the pleasure of visits from some of the librarians enroute is anticipated.

ENTRANCE REQUIREMENTS

The course is intended especially for Iowa librarians who are in charge of small libraries. Those who have had some experience in library work or wish to prepare for definite positions will be given preference. Inasmuch as emphasis is laid on practice work and prompt technical revision and correction, the number admitted to the class must be limited. If this limit is not reached by those above mentioned others may be admitted. The requirements for admission are at least a four years' high school course or its equivalent. Applications should be made on the blank form to be obtained of the director, Miss Alice S. Tyler, State Library Commission, Des Moines, Iowa, and should be sent in not later than May 1, 1901.

Admission to part of the course may be considered in special cases, but it is desirable that the entire six weeks' course be taken by all who plan to attend.

EXPENSES

In addition to the regular summer school tuition fee of \$5, there will be the cost of library material necessary for practice work and the necessary text-books, which will not exceed \$10.

Address all communications regarding the instruction to Miss Alice S. Tyler, Secretary Iowa Library Commission, Des Moines, Iowa.

Iowa School of Political
and Social Science

FACULTY OF INSTRUCTION

GEORGE EDWIN MACLEAN, M. A., LL. D.,

President.

ISAAC ALTHAUS LOOS, M. A., D. C. L.,

Professor of Sociology and Political Philosophy, and Director of the
School of Political and Social Science.

WILLIAM CRAIG WILCOX, M. A.,

Professor of History.

BENJAMIN FRANKLIN SHAMBAUGH, M. A., PH. D.,

Professor of Political Science.

HARRY GRANT PLUM, M. A.,

Instructor in History.

WILLIAM ROLLA PATTERSON, M. A., PH. D.,

Instructor in Economics and Statistics.

J. E. CONNER, B. A.,

Fellow in Sociology and Economics.

SIMEON E. THOMAS, B. PH.,

Fellow in Political Science.

GEORGE LUTHER CADY, B. A.,

Fellow in Sociology.

DAVID JONES,

Scholar in History.

PURPOSE OF THE SCHOOL

The Iowa School of Political and Social Science was established by the Board of Regents in June, 1900. It comprehends the following departments of instruction: Sociology, Economics, Politics, and History. The aim of the school is to give a complete general view of all of the political and social sciences, and to foster the further development of all of the branches thereof. Its more immediate and practical object is to prepare the students of the University for the intelligent exercise of the rights and duties of citizenship in a free commonwealth, and to fit them for the various branches of the public service, and for the wider avenues of business. It aims furthermore to supplement by courses in public law and comparative jurisprudence the instruction in private municipal law given by the Faculty of Law, and to give to those who intend to make journalism their profession, adequate training in historical, economic, and legal subjects. Finally it aims to educate teachers of the several branches of political and social science.

COURSES OF STUDY

The student who desires to do special work in the political and social sciences will naturally elect the classical or one of the philosophical courses, leading respectively to the degree of B. A. or B. Ph.; and if he wishes to specialize in history, politics, or economics, he should, in the freshman year, take Greek and Roman history, and in the sophomore year he should select at least two of the courses open to him in history, politics, and economics. He may thereafter pursue his chosen subjects throughout two years. The last year he may, if he choose, devote entirely to his specialty.

SPECIAL LIBRARIES

In addition to the general University library, students in the school have access to two valuable special libraries: the Hammond Historical Law Collection, and the Library of the State Historical Society of Iowa.

HAMMOND HISTORICAL LAW COLLECTION

A valuable collection of 1,200 volumes relating principally to the civil law and the history of the common law, presented

to the University by the widow of William G. Hammond, LL. D., the first Chancellor of the College of Law, is kept in the law library as a separate collection for the use of the students of the departments and others interested in such subjects. These books are in special cases, under the charge of the law librarian and accessible on demand.

THE LIBRARY OF THE STATE HISTORICAL SOCIETY OF IOWA

The library of the Iowa Historical Society, located in Iowa City and consisting of 16,000 volumes, is open for the use of University students. This valuable collection of historical documents is rapidly growing. The society issues its own publications regularly and has on its exchange lists the publications of similar societies in the United States, as well as a large number of foreign publications and the publications of leading universities, both at home and abroad.

PUBLICATIONS

The Faculty of Political and Social Science are the editors of a series of studies in sociology, economics, politics, and history, of which the following have so far appeared: Vol. 1, *Studies in the Politics of Aristotle, and the Republic of Plato*, by Isaac Althaus Loos; the University Press, 1899, pp. 296. Vol. 2, No. 1, *The Early History of Banking in Iowa*, by Fred D. Merritt, M. A., Ph. D.; the University Press, 1900, pp. 150.

THE POLITICAL SCIENCE CLUB

The Political Science Club is devoted to the cultivation and advancement of the political and social sciences. The club has held regular meetings since October, 1896. A formal organization was effected in January, 1897. The club now holds fortnightly sessions from October to May each year. At these sessions papers are read by members or by invited guests, presenting the results of original investigation in some subject in any one of the following group of sciences: History, economics, sociology, politics, law, education, and ethics. The membership of the club is limited to the faculties of instruction in the several departments interested.

COURSES OF INSTRUCTION

The courses of instruction offered by the instructional staff of the school are formally announced in the departments of History, Politics, Sociology, and Economics.

UNIVERSITY EXTENSION

In its desire to increase the effectiveness of its service to the people of the state, the University offers lectures to the public on the conditions herein stated.

The lectures offered are of two classes, viz.: (1) single lectures, and (2) University Extension courses.

The single lectures, while they do not meet the requirements of the accepted standards of university extension work, are offered in the belief that they will be useful as aids to the introduction of this work in communities in which university extension organizations have not been established, and the further belief that they will serve a useful purpose in enabling the University to meet a somewhat general demand for a brief presentation of certain subjects which appeal to the popular interest.

These lectures will be given under the auspices of local organizations or responsible individuals. In the past it has been customary to deal with various sorts of organizations. In most cases the lectures have been given under the auspices of special university centers maintained from year to year for the purpose of carrying on university extension work. In other cases they are given under the auspices of high schools, church societies, or women's clubs.

The local organizations will be expected to make the necessary arrangements for meeting the expense of the work in their respective communities. The expense so far as the University is concerned, will include the following items:

1. A minimum fee of \$10.00 for each lecture. In the cases of the lectures for which larger amounts are charged, the amount of the fee will be arranged by correspondence with the Director of University Extension.

2. The necessary traveling expenses, including hotel bills, of the lecturers employed.

3. The expense of securing a stereopticon and operator when illustrated lectures are given.

The lecture fees and expense accounts will in all cases be paid directly to the lecturers. The University will furnish to the local organization, in each case, copies of a printed syllabus for distribution among those in attendance upon the lecture.

ACCREDITED HIGH SCHOOLS

The Board of Regents has adopted the following plan for the examination of high school pupils and for general high school inspection:

1. Any school may be placed upon the accredited list upon application of its superintendent or principal, and its board of directors, provided the Faculty of the College of Liberal Arts is satisfied as to its (a) course of study, (b) methods of teaching, (c) facilities for instruction.

2. The course of study of such a school must be adapted to fitting its graduates for one or more of the collegiate courses of the University, or it must be in the direct line of such preparation.

3. Whenever any accredited or other school requests it, its pupils may be examined by the University at a convenient time in any subject or subjects selected by the school authorities from the schedules of studies required for admission to the University, and each pupil will receive from the University a credit card for each subject passed.

4. The University shall provide for schools desiring the same, a syllabus of each of the subjects in which examination is to be taken.

5. All accredited schools shall be inspected at the pleasure of the University, the expense of the inspection to be borne by the University.

6. The authorities of accredited schools should report annually to the University all changes made in the courses of study and submit a list of names of the instructors employed in the high school with subjects taught by each.

The following revised rules governing the accrediting of high schools have been adopted by the Faculty of the College of Liberal Arts, and are now in force. The attention of the authorities of accredited schools is called to the revised rules in order that they may make such changes in their courses of study and in their plans of work as will enable them fully to conform to the rules.

RULES GOVERNING THE ACCREDITING OF HIGH
SCHOOLS

High schools meeting the following conditions may, at the option of the Faculty of Liberal Arts, be accredited as making full preparation for one or more College courses; and graduates of such schools will be admitted to the University without being subject to any examination except that in English and English grammar, which is required of all entering students:

1. The course of study should not be less than four years of thirty-six weeks each in length, following an elementary course not less than eight years in length.

2. The course of study should require of each pupil not more than four recitations daily.

3. The entire time of at least three teachers should be given to instruction in high school branches.

4. The quality of the instruction given and the character of the text-books used should be approved by the Faculty.

5. Schools seeking considerable credit in science should demonstrate their ability to do successful laboratory work.

6. Schools seeking considerable credit in history and English should give evidence of a special library equipment for teaching these branches.

Private academies, seminaries, normal schools, or other secondary schools, meeting the conditions mentioned above, or their equivalent, may be accepted on the same basis as high schools.

LISTS OF ACCREDITED SCHOOLS

There are doubtless other schools which are entitled to places on one or the other of these lists, but because they have not furnished the data necessary to enable the University authorities to come to a safe conclusion in regard to their proper places in the lists, or because they have not signified a desire to come into accredited relations with the University, they are for the present omitted, without prejudice. Applicants presenting themselves from secondary schools, not included in the list of accredited schools, will be admitted only upon examination.

The following schools have been accredited by the Faculty of the College of Liberal Arts as making full preparation for one or more of the courses of the College of Liberal Arts :

HIGH SCHOOLS

Ackley,	Greene,
Adel,	Greenfield,
Albia,	Grinnell,
Algona,	Guthrie Center,
Ames,	Guthrie County,
Anamosa,	Hamburg,
Atlantic,	Hampton,
Avoca	Harlan,
Bedford,	Humboldt
Belle Plaine,	Ida Grove,
Boone,	Independence,
Britt,	Iowa City,
Brooklyn,	Iowa Falls,
Burlington,	Jefferson,
Capital Park, Des Moines,	Keokuk,
Carroll,	Knoxville,
Cedar Falls,	Lake City,
Cedar Rapids,	Lamoni,
Centerville,	LeMars,
Charles City,	Leon,
Cherokee,	Lyons,
Clarinda,	Manchester,
Clarion,	Maquoketa,
Clinton,	Marengo,
Columbus Junction,	Marion,
Corning,	Marshalltown,
Corydon,	Mason City,
Council Bluffs,	McGregor,
Cresco,	Missouri Valley,
Creston,	Moline, Ill.,
Davenport,	Montezuma,
Decorah,	Monticello,
Denison,	Mt. Ayr,
Des Moines, E.,	Muscatine,
Des Moines, N.,	Nashua,
Des Moines, W.,	Nevada,
Dubuque,	New Hampton,
Eagle Grove,	Newton,
Eldora,	Odebolt,
Emmetsburg,	Onawa,
Etherville,	Osage,
Fairfield,	Osceola,
Forest City,	Oskaloosa,
Fort Dodge,	Ottumwa,
Fort Madison,	Parkersburg,
Geneseo, Ill.,	Perry,
Glenwood,	Postville

Red Oak,	Taylorville Tp., Taylorville, Ill.,
Reinbeck,	Tipton,
Rockford,	Traer,
Rock Rapids,	Villisca,
Sanborn,	Vinton,
Sheldon,	Washington,
Shenandoah,	Waterloo, East,
Sibley,	Waterloo, West,
Sigourney,	Waukon,
Sioux City,	Waverly,
Spencer,	Webster City,
St. Mary's, Iowa City,	West Liberty,
Storm Lake,	Wilton,
Stuart,	Williamsburg.

OTHER SCHOOLS

Cedar Valley Seminary, Osage,	Mount St. Joseph Academy,
Charles City College,	Dubuque,
Decorah Institute,	Sac City Institute,
Denison Normal School,	St. Agatha's Seminary, Ia. City,
Dexter Normal College,	Urbana-Shrader Academy, Ur-
Epworth Seminary,	bana,
Howe's Academy, Mt. Pleasant,	Washington Academy,
Iowa City Academy,	Whittier College,
Jewell Lutheran College, Jewell,	Wilton German-English Col-
Lincoln Academy, Lincoln, Neb.,	lege,
Michigan Military Academy,	Woodbine Normal School.
Orchard Lake, Mich.,	

The work done in the schools named below is regarded as of sufficient merit to entitle them to recognition by the University.

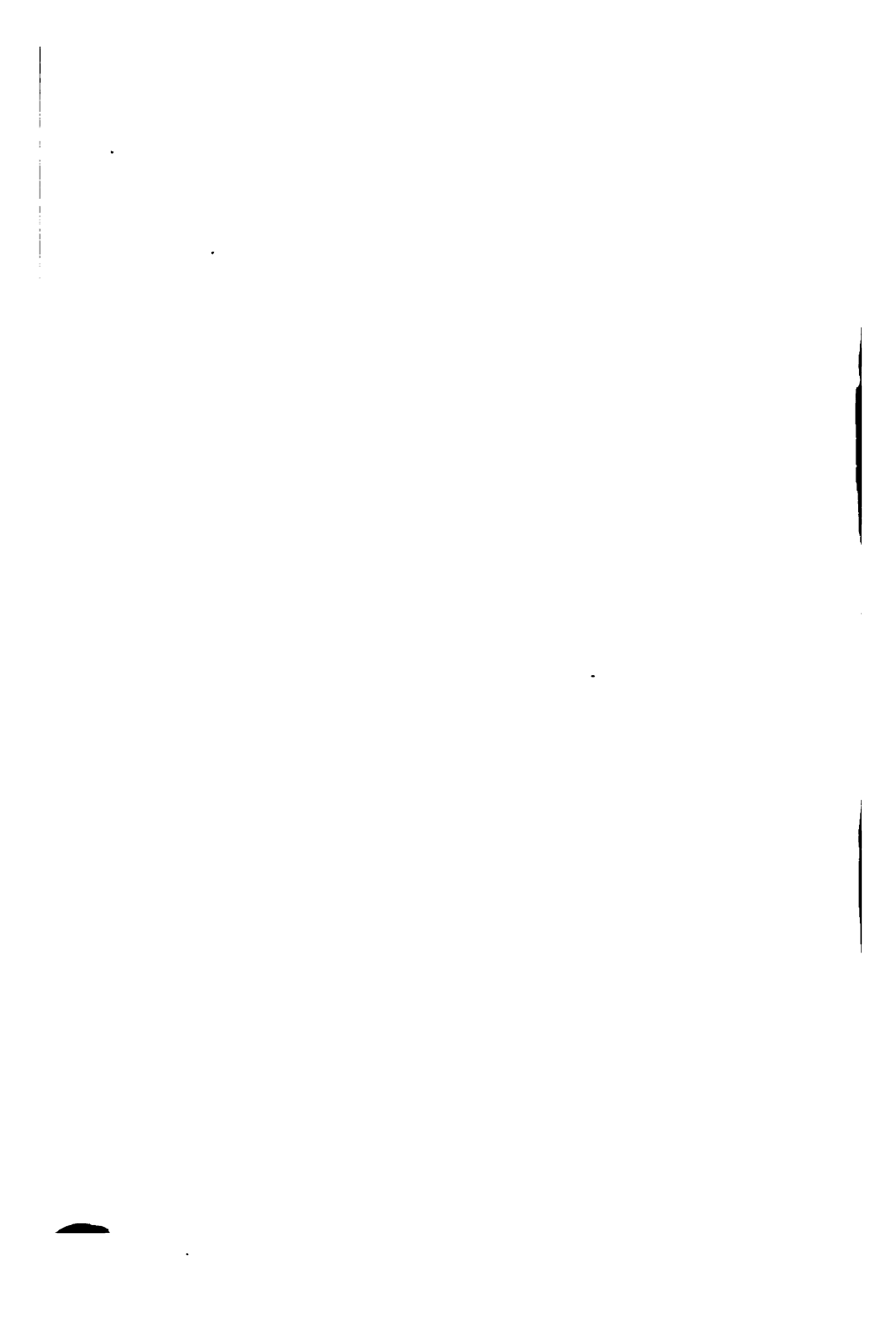
In some of these schools sufficient work is done to entitle their pupils to enter the University with the conditions allowed. In some cases applications have been made to be placed upon the accredited list, but action on these applications has been deferred until these schools can be inspected by a representative of the University.

Properly certified work from these schools will be received for the present so far as this work meets the preparatory requirements of the University.

Adair,	Charter Oak,
Allerton,	Clearfield,
Alton,	Clear Lake,
Anita,	Colfax,
Audubon,	Coon Rapids
Bloomfield,	Correctionville,
Brighton,	DeWitt,
Chariton,	Dysart,

Eldon,	North English,
Elkader,	Northwood,
Exira,	Oak Park, Des Moines,
Farmington,	Oelwein,
Fayette,	Orange City,
Fonda,	Pella,
Fontanelle,	Riceville,
Garner,	Richland,
Glidden,	Rolfe,
Grand Junction,	Sac City,
Grundy Center,	Shelby,
Hartley,	Shell Rock,
Holstein,	Sioux Rapids,
Hubbard,	Springdale,
Keosauqua,	Springville,
Kingsley,	State Center,
Lake Mills,	Tabor,
Lime Springs,	Tama City,
Manning,	Victor,
Mapleton,	Wapello,
Mechanicsville,	West Union,
Milton,	Winfield,
Morning Sun,	Calhoun Co. Normal School,
Moulton,	Hawarden Normal School,
Mt. Pleasant,	Nora Springs Seminary,
Neola,	St. Ansgar Seminary.
New Sharon,	

Graduate College



THE GRADUATE FACULTY

FACULTY*

- GEORGE EDWIN MACLEAN, PH. D., LL. D., President.**
603 College St. (Old Capitol).
- AMOS NOYES CURRIER, M. A., LL. D., Professor of Latin Language and Literature, and Dean of the College of Liberal Arts.**
32 Bloomington St. (7 Old Capitol).
- SAMUEL CALVIN, M. A., PH. D., Professor of Geology.**
522 N. Clinton St. (Natural Science Hall, first floor).
- THOMAS HUSTON MACBRIDE, M. A., PH. D., Professor of Botany.**
728 Washington St. (Natural Science Hall, second floor).
- LAUNCELOT WINCHESTER ANDREWS, PH. D., Professor of Chemistry.**
251 S. Johnson St. (Chemical Laboratory, second floor).
- GEORGE THOMAS WHITE PATRICK, PH. D., Professor of Philosophy.**
704 N. Dubuque St. (Clinton St. Building, first floor).
- CHARLES BUNDY WILSON, M. A., Professor of German Language and Literature, and Secretary of the Faculty of Liberal Arts.**
919 E. College St. (6 Old Capitol).
- ANDREW ANDERSON VEBLEN, M. A., Professor of Physics.**
707 N. Dubuque St. (North Hall, first floor).
- LAENAS GIFFORD WELD, M. A., Professor of Mathematics, and Dean of the Graduate College.**
612 N. Dubuque St. (Armory, second floor).
- CHARLES CLEVELAND NUTTING, M. A., Professor of Zoology, and Curator of Museum of Natural History.**
922 E. Washington St. (Natural Science Hall, third floor).
- ISAAC ALTHAUS LOOS, M. A., D. C. L., Professor of Sociology and Political Philosophy, and Director of the School of Political and Social Science.**
22 E. Bloomington St. (4 Old Capitol).

*The faculty of the University numbers over one hundred and fifty professors, instructors, and assistants. The following list contains the names of only those in the departments offering courses of instruction for graduate students.

- JOSEPH JASPER MCCONNELL, M. A.**, Professor of Pedagogy,
Inspector of Schools, and Dean of the Summer Session.
331 Summit St. (Clinton St. Building, second floor).
- ELBERT WILLIAM ROCKWOOD, B. S., M. D.**, Professor of
Chemistry and Toxicology, and Secretary of the Faculty
of Medicine.
1011 Woodlawn. (Chemical Laboratory, first floor).
- WALTER LAWRENCE BIERRING, M. D.**, Professor of Bacteri-
ology and Pathology.
Corner Governor St. and Iowa Ave. (Medical Hall).
- WILLIAM CRAIG WILCOX, M. A.**, Professor of History.
629 N. Dubuque St. (10 South Hall).
- FREDERICK C. L. VAN STEENDEREN, M. A.**, Professor of
French Language and Literature.
309 Church St. (8 South Hall).
- ALFRED VARLEY SIMS, C. E.**, Professor of Civil Engineering.
Bloom Terrace. (South Hall, first floor).
- GILBERT LOGAN HOUSER, M. S.**, Professor of Animal Mor-
phology and Physiology.
422 Iowa Ave. (Natural Science Hall, first floor).
- BENJAMIN FRANKLIN SHAMBAUGH, M. A., Ph. D.**, Professor
of Political Science.
164 Market St. (4 Old Capitol).
- WILLIAM ROBERT WHITEIS, M. D., M. S.**, Professor of His-
tology and Embryology.
425 Iowa Ave. (Medical Hall).
- CLARK FISHER ANSLEY, B. A.**, Professor of English.
725 N. Linn St. (6 South Hall).
- LEONA ANGELINE CALL, M. A.**, Professor of Greek Language
and Literature.
21 N. Dubuque St. (Close Hall, second floor).
- HENRY EVARTS GORDON, B. A.**, Professor of Public Speaking.
Bloom Terrace. (South Hall, second floor).
- ARTHUR FAIRBANKS, Ph. D.**, Professor of Greek Literature
and Archaeology, and Secretary of the Graduate Faculty.
311 Ronalds St. (Close Hall, second floor).
- CHARLES SCOTT MAGOWAN, M. A., C. E.**, Assistant Professor
of Civil Engineering.
304 Summit St. (South Hall, first floor).
- BOHUMIL SHIMEK, C. E.**, Assistant Professor of Botany, and
Curator of the Herbarium.
529 Brown St. (Natural Science Hall, second floor).

HENRY FREDERICK WICKHAM, M. S., Assissant Professor of Zoology and Assistant Curator of the Museum of Natural History.

911 Iowa Ave. (Natural Science Hall, third floor).

ARTHUR GEORGE SMITH, M. A., Assistant Professor of Mathematics.

422 N. Dubuque St. (Armory, second floor).

FRANKLIN HAZEN POTTER, M. A., Assistant Professor of Latin.

527 N. Linn St. (7 Old Capitol).

CARL EMIL SEASHORE, PH. D., Assistant Professor of Philosophy.

204 E. Fairchild St. (Clinton St. Building, first floor).

ALICE YOUNG, B. L., Assistant Professor of English, and Dean of Women.

111 W. Clinton St. (South Hall, second floor).

FREDERICK E. BOLTON, M. S., PH. D., Assistant Professor of Pedagogy.

122 Court St. (Clinton St. Building, second floor).

ALDEN ARTHUR KNIPE, M. D., Director of Physical Culture.

21½ S. Clinton St.

LUTHER ALBERTUS BREWER, M. A., Lecturer on Journalism, and University Publisher.

Cedar Rapids, Iowa. (7 South Hall).

BERTHA GILCHRIST RIDGWAY, Librarian.

4 Jefferson St. (Library).

FREDERICK BERNARD STURM, B. A., Instructor in German.

422 Iowa Ave. (5 South Hall).

HARRY GRANT PLUM, M. A., Instructor in History.

421 N. Dubuque St. (South Hall, second floor).

HERBERT C. DORCAS, B. PH., Instructor in Pedagogy, and University Examiner.

427 Reynolds St. (Clinton St. Building, second floor).

LOUISE ELIZABETH HUGHES, M. A., Instructor in Latin.

122 N. Capitol St. (Close Hall).

WILLIAM ROLLA PATTERSON, PH. D., Instructor in Statistics and Economics.

505 Washington St. (4 Old Capitol).

CLARENCE WILLIS EASTMAN, PH. D., Instructor in German.

430 N. Clinton St. (Close Hall).

CARL LEOPOLD VON ENDE, PH. D., Instructor in Chemistry.

220 S. Johnson St. (Chemical Laboratory, second floor).

- JOHN VAN ETTEN WESTFALL, PH. D.**, Instructor in Mathematics.
 Corner Fairchild and Linn Sts. (Armory, second floor).
- *AUGUST VON ENDE, B. S.**, Instructor in Mathematics.
 220 S. Johnson St. (Armory, second floor).
- JOHN JOSEPH LAMBERT, B. PH.**, Instructor in Animal Morphology and Physiology.
 114 E. Market St. (Natural Science Hall, first floor).
- GEORGE TOBIAS FLOM, PH. D.**, Instructor in Scandinavian Language and Literature.
 618 N. Dubuque St. (Old Capitol, first floor).
- JOHN DAVIS BATCHELDER, B. A., LL. B.**, Instructor in French.
 St. James Hotel. (Close Hall, second floor).
- RUSSELL D. GEORGE, M. A.**, Instructor in Geology.
 704 N. Dubuque St. (Natural Science Hall, first floor).
- SIVERT N. HAGEN, PH. D.**, Instructor in English.
 21 E. Bloomington St. (South Hall, second floor).
- CHARLES FREDERICK LORENZ, M. S.**, Instructor in Physics.
 215 Ronalds St. (North Hall, first floor).
- WILLIAM EDWARD BARLOW**, Demonstrator of Chemistry in the College of Medicine.
 (Fairchild Street. (Chemical Laboratory).
- HENRY MAX GOETTSCH, M. S.**, Demonstrator of Chemistry in the College of Medicine.
 912 Bowery St. (Chemical Laboratory, first floor).
- JOHN THOMAS MCCLINTOCK, B. A., M. D.**, Demonstrator of Anatomy, Pathology and Bacteriology in the College of Medicine.
 218 E. Davenport St. (Medical Hall).
- FRANK NEWTON BRINK, B. PH.**, Assistant Instructor in Chemistry.
 222 N. Dubuque St. (Chemical Laboratory, second floor).
- SAM BERKELEY SLOAN, B. A.**, Assistant Instructor in English.
 230 Fairchild St.
- CLYDE BARNES COOPER, B. A.**, Assistant Instructor in English.
 15 Harrison St.
- GAYLORD D. WEEKS**, Assistant Instructor in Civil Engineering.
 304 Summit St. (South Hall, first floor).

*Resigned January 1, 1901.

MABEL R. MORGAN, Assistant Instructor in Physical Training.
615 N. Dubuque St.

WILLIAM EDMUND BECK, B. S., Assistant Instructor in Mathematics.

518 S. Clinton St. (Armory, second floor).

**THE ADMINISTRATIVE COUNCIL OF THE
GRADUATE COLLEGE**

DEAN WELD, Chairman; Professor **FAIRBANKS**, Secretary; Professors **ANDREWS, ANSLEY, BIERPING, FAIRBANKS, NUTTING, PATRICK**.

**GRADUATE APPOINTMENTS FOR THE ACADEMIC
YEAR 1900-1901**

- KATHERINE PAINE,** Iowa City
B. Ph., State Univ. of Iowa, 1889.
Fellow in Latin Language and Literature.
- H. HEATH BAWDEN,** Granville, Ohio
B. A., Denison Univ., 1893; M. A., 1894; Ph. D., Univ. of
Chicago, 1900. Fellow in Philosophy
- MABEL CLARE WILLIAMS,** Iowa City
Ph. D., State Univ. of Iowa, 1899. Fellow in Psychology
- LEE PAUL SIEG,** Marshalltown
B. S., State Univ. of Iowa, 1900. Scholar in Physics
- WILLIAM EDMUND BECK,*** Sioux City
B. S., State Univ. of Iowa, 1900. Scholar in Mathematics
- SATORU TETSU TAMURA,** Tokio, Japan
B. S., Simpson College, 1900. Scholar in Mathematics
- GEORGE LUTHER CADY,** Iowa City
B. A., Olivet Col., 1891; B. D., Chicago Theological Sem.
1894. Honorary Fellow in Sociology
- JACOB ELON CONNER,** Mt. Pleasant
B. A., State Univ. of Iowa, 1891.
Fellow in Sociology and Political Philosophy
- OSCAR PERCY JOHNSTON,** Van Cleave
B. Ph., Iowa College, 1897.
Fellow in Chemistry (Col. of Med.)
- THEODORE WILBERT KEMMERER,** Eldridge
B. S., State Univ. of Iowa, 1900.
Scholar in Pathology and Bacteriology (Col. of Med.)
- DAVID JONES,** Oskaloosa
B. A., Penn College, 1900. Scholar in History
- BERTHA ALICE WILLIAMS,** Iowa City
B. Ph., State Univ. of Iowa, 1888.
Fellow in French Language and Literature

*Appointed Assistant Instructor in Mathematics, January 1, 1901.

GRADUATE COLLEGE

195

- SIMEON E. THOMAS,** Nora Springs
B. Ph., Upper Iowa Univ., 1898. Fellow in Political Science
- FRANK ALBERT STROMSTEN,** Corydon
B. S., State Univ. of Iowa, 1900.
Scholar in Animal Morphology
- PERCIVAL HUNT,** Cedar Falls
B. Di., Iowa State Normal School, 1898; B. A., State Univ.
of Iowa, 1900. Scholar in English
- ELEANORE HATCH,** Iowa City
B. A., State Univ. of Iowa, 1898. Scholar in English
- CHARLES LEONARD SMITH,** Iowa City
B. A., State Univ. of Iowa, 1891.
Fellow in Histology (Col. of Med.)

GENERAL INFORMATION

The excellent opportunities offered by the State University of Iowa for the pursuit of advanced studies in various branches of knowledge have from the first attracted considerable numbers of college graduates to the institution. As the opportunities for advanced study multiplied, the number of such students became larger and several of the departments found it expedient to offer courses specially designed for graduates.

The first noteworthy step toward the development of a graduate college was taken in 1888, when the practice of conferring the degree of Master of Arts upon all bachelors of three years' standing who had been engaged in professional or literary work was definitely discontinued. In 1893 the graduate work of the University had become of such importance as to warrant the appointment of a standing committee for its supervision and for the definition of the terms upon which the degrees of Master of Arts and Master of Science might be conferred. The policy inaugurated by this committee differed but little from that in operation at the present time and its effect was immediate and salutary. The number of advanced courses open to graduates steadily increased and the facilities for successfully prosecuting special work were greatly improved.

In 1898 applications for admission to candidacy for the degree of Doctor of Philosophy were for the first time accepted, and then only from graduate students in residence at the University. The question of accepting non-resident candidates for the degrees of Master of Arts and Master of Science was disposed of in 1899 when, upon the recommendation of the standing committee on graduate students, it was voted by the Faculty that no candidate *in absentia* would be accepted after October 1, 1900, and that all such existing candidacies shall lapse in June, 1903.

The Graduate College was instituted by action of the Board of Regents on June 7, 1900. Besides recognizing the College and appointing a dean the Board established certain fellow-

ships and scholarships, the number of which was increased to twenty at the adjourned meeting of July 19. The first annual announcement was issued in August, 1900.

A council of seven members, appointed by the President of the University, co-operates with the dean in the administration of the College.

A wide range of advanced courses of study is already offered to a large and increasing number of students.

ADMISSION

Any person known to be a graduate in good standing of an accredited college of liberal arts may be admitted to the Graduate College. Admission to specific courses of study to be taken in candidacy for an advanced degree, however, can only be granted upon the recommendation of the respective professors in charge of such courses.

There are no tuition fees in the Graduate College. A diploma fee of \$10 is charged for each advanced degree conferred.

FELLOWSHIPS AND SCHOLARSHIPS

No definite announcement can as yet be made regarding the fellowships and scholarships available for the academic year 1901-1902. There are at present sixteen of these appointments and it is hoped that this number may be increased to twenty-four.

The value of a scholarship has been fixed at \$125 per year and that of a fellowship at \$225, with exemption from all University fees in each case. In general, a fellowship is granted only to the graduate student of at least one year's standing, while a scholarship may be conferred upon graduation from any accredited college of liberal arts.

Applications for graduate appointments must be made to the President upon blanks prepared for the purpose and obtainable from any officer of the University. All applications to be acted upon at the spring meeting of the Board of Regents must be submitted before the second Friday in March.

The following regulations, adopted by the Faculty of the Graduate College and authorized by the Board of Regents, are in force:

1. Each fellow or scholar will be required to pursue his studies under the direction of the professors in charge of his

major and minor courses and to render to the University such services as may be required of him by the President in consultation with the professor in charge of his major course; it being understood that the maximum amount of service to be expected of a scholar shall be the equivalent of teaching three hours or of superintending laboratory work for six hours per week, while that required of a fellow may not exceed twice the above amount.

2. Each student holding a fellowship or a scholarship shall be in actual attendance at the University throughout the academic year for which he is appointed, unless excused by the President and the head of his department.

3. The applicant for a fellowship or a scholarship will be expected to demonstrate his capacity for original research and must give evidence of marked attainments in one or more lines of study. Testimonials from responsible persons as to the general worthiness of the candidate must accompany the application, though no appointment to a fellowship will be made upon recommendations not supported by specimens of the applicant's original work.

4. Each application for a fellowship or scholarship shall, if approved by the head of the department in which the appointment is sought, be referred by him to the council of the Graduate College. The council shall consider all applications thus approved and referred and submit a report to the Graduate Faculty, not later than the third Friday in March, recommending a list of appointments assigned to the several departments as equitably as may be, the relative qualifications of the several applicants having been accorded due weight. This report, as amended by the faculty, shall, upon the approval of the President, be transmitted to the Board of Regents or its executive committee for final action at the spring meeting.

A second assignment of fellowships and scholarships may be made in the same manner at the June meeting of the Board.

5. All graduate appointments shall be for one year. Both fellows and scholars may be recommended for re-appointment at the discretion of the council, but for a second year only.

6. Any graduate appointment may be withdrawn at any time upon the concurrent recommendation of the President of the University and the head of the department in which the appointment is held.

ADVANCED DEGREES

The Graduate College confers the following degrees: **Master of Arts, Master of Science, Doctor of Philosophy, Civil Engineer, Electrical Engineer.** The requirements for these degrees are fully explained below.

MASTER OF ARTS AND MASTER OF SCIENCE

The degree of Master of Arts, or of Master of Science, will be conferred upon resident graduates under the following conditions :

1. The candidate must be a graduate of this University, or of an accredited university or college.

2. He must have pursued, during one or more years, a course of graduate study at this University, covering one major and one minor subject; in a two years' course, one major and two minors being allowed. His studies during this time are to be under the immediate supervision and control of the professors immediately concerned and to be subject to the approval of the faculty.

3. In all cases the minor or minors must be closely allied to the major subject; provided, however, that any candidate in residence for two or more years may select a modern language as a second minor in his course.

4. The candidate must submit a thesis of at least 5,000 words, showing marked attainment in some branch of learning. The subject of this thesis must be announced to the Faculty for approval not later than the second Friday in December, and the thesis itself must be presented to the examining committee at a date to be set by the professor in charge of the thesis work, but not later, in any case, than May 20 of the year in which the degree is expected.

5. He must, at the close of his course, pass a satisfactory examination, both oral and written, conducted by a committee which shall consist of three professors, selected by the faculty for this purpose.

6. A graduate student in any professional college of the University, pursuing work in the Graduate College, may become a candidate for an advanced degree: but two years of such candidacy shall be necessary to fulfill the requirement of one year imposed by rule 2 above, the time to be reckoned from the date of the application for the advanced degree.

7. The degree of Master of Arts will be granted only upon the completion of a course mainly literary in character; the degree of Master of Science, after one mainly scientific.

Non-resident graduates may receive the degree of Master of Arts, or of Master of Science, on complying with the following conditions in addition to or modifying those enumerated for residents. Since October 1, 1900, no candidate *in absentia* has been accepted, and all existing candidacies *in absentia* will lapse in June, 1903.

1. The candidate will be required to outline a course of study, comprising a major and one allied minor subject, which must be approved by a committee of two or more professors appointed to pass upon it.

2. He shall at the close of each academic year present a report, which should comprise a complete synopsis of the year's work, naming topics studied and authors read. These annual reports are expected to be specific and comprehensive.

3. His graduate studies must extend over three years, although in exceptional cases, where the candidate devotes a large part of his time to study, a shorter course, but in no case less than two years, may be accepted.

4. Candidates for the master's degree who have graduated elsewhere are required to spend at least one year in residence at this University.

DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy will be granted under the following conditions :

I. Prerequisites.

1. The candidate must have received the bachelor's degree either from this institution or from some other of equal rank.

2. He must present evidence of having completed a satisfactory amount of undergraduate work in the subjects proposed for investigation for this degree.

3. He must possess a knowledge of French and German at least sufficient for purposes of research.

II. Conditions of Candidacy.

1. At least three years of graduate study will ordinarily be required. Of these, two must be in residence and the last year prior to receiving this degree must be spent at this University.

2. In making formal application for this degree the candidate shall select one major study and one or two minors. The minor study or studies shall be closely allied to the major and

shall be such as, with it, to constitute a single field of research.

3. The application of the candidate setting forth the line of research proposed shall be approved and endorsed by the professor or professors under whose direction it is proposed to prosecute the work.

III. Dissertation.

1. On completion of his work the candidate shall submit to the faculty a formal dissertation which shall not only exhibit evidence of original research, but shall in itself be a contribution to the sum of human knowledge.

2. The dissertation must be in acceptable literary form; although its acceptance will depend chiefly upon the subject matter.

3. The subject of the proposed dissertation must be submitted to the faculty not later than the last Friday in September of the year preceding that in which the degree is expected; and a copy of the dissertation, printed or type-written, must be in the hands of the Secretary of the Faculty not later than the 20th day of May of the year in which the degree is expected. In case the dissertation offered is accepted by the Faculty and the candidate passes satisfactorily the examination provided for in the next section following, he shall, prior to receiving his degree, deposit with the librarian of the University twenty-five printed copies of the dissertation so accepted.

IV. Examinations.

1. At such time as may be agreed upon by the candidate and the professors in charge of his work, he shall pass an examination, both oral and written; the examination to be conducted by the professors immediately concerned, the written privately, the oral in the presence of the Faculty. For purposes of this examination five members of the Faculty of the Graduate College shall constitute a quorum.

CIVIL ENGINEER AND ELECTRICAL ENGINEER

Graduates from the engineering courses receive the degree of Bachelor of Science in Civil or Electrical Engineering. The degree of Civil Engineer or Electrical Engineer will be conferred on graduates who have practiced the profession at least three years, and who have submitted an approved thesis and passed a satisfactory examination.

COURSES OF STUDY FOR GRADUATES

It is the aim of the University to furnish facilities for advanced study commensurate with the demand for such work. No set courses of study leading to any of the advanced degrees are provided; each candidate for one of these degrees pursuing an independent line of study, in which regular university courses are usually combined with special research work, original in character, laid out with the advice of the professors and carried out under their direction.

The elastic nature of the elective system here in operation renders the more advanced courses in many branches as valuable to the graduate as to the advanced undergraduate. The seminars, for example, hold out encouragement and opportunities for a great deal of original study and research, as do also a number of the advanced courses in the different departments. In the following pages will be found grouped together those courses which are of special interest to graduates. In every case courses intended for graduates only (C) are distinguished from those open also to undergraduates (B). To the former undergraduates are admitted only under exceptional circumstances and subject to the discretion of the professor in charge of the work.

The courses intended only for undergraduates (A) are not here given, but may be found in the current announcement of the College of Liberal Arts. The numbers here given to the several graduate courses are continuous with those designating the undergraduate courses.

Additional graduate courses will be arranged in connection with the summer session for the benefit of those unable to do work in residence during the regular academic year. Details as to these courses are given in the Announcement of the Summer Session of 1901.

GREEK LANGUAGE AND LITERATURE

ARCHÆOLOGY

PROFESSOR FAIRBANKS; PROFESSOR CALL.

Ordinarily candidates for advanced degrees are expected to have completed four years of work in Greek before under-

taking the work of the graduate courses. The aim of these courses is to enlarge the student's view of the field in which he is working, to train him in correct methods of study and investigation, and to encourage him to pursue lines of original research. In connection with each course the student is urged to read Greek authors both widely and accurately. The general aim of the first year of graduate work will be to render the knowledge he has gained in earlier work more accurate, and to place it more completely at his command. In the preparation of the thesis offered for an advanced degree he has the benefit of the constant direction and advice of his instructor.

During the past year the library has spent a considerable sum of money on books for the department of Greek; not only the texts of classic authors, but also the more important annotated editions have been obtained, the sets of periodicals containing the results of philological and archæological investigations are being placed on the shelves, and in some lines of archæology the standard publications have already been secured. The University has also begun a collection of photographs and lantern slides which are used to illustrate the courses in archæology, and to some extent the courses in Greek literature. The collection owned by the University is supplemented by several hundred slides and many photographs belonging to the instructors in this department.

In the new Liberal Arts Building the departments of Greek and Latin will receive ample accommodation. In addition to the regular recitation rooms, a well-lighted room is set apart as a working room for advanced students in the classics. For the present many books from the general library, which are not needed by beginning classes, will be placed in this seminary library; and gradually the seminary room will be equipped with a special department library.

Graduates who offer Greek as their major are not required to take Latin as a minor, but they are strongly urged to do so. A working knowledge of Latin, as well as of French and German, is, of course, required of candidates for the doctor's degree.

B. COURSES FOR GRADUATES AND UNDERGRADUATES

9. GREEK DRAMA II: SOPHOCLES—The entire seven plays are read with care; lectures on Greek meters and on the historical development of Greek tragedy accompany the reading,

and students are expected to prepare one paper each term on a subject connected with their work. Professor CALL.

This course will be given in 1901-1902 and omitted the following year.

Three hours a week.

[10. GREEK HISTORY—An advanced course in Greek History for students who are prepared to make investigations from the original sources. In 1902-1903 the period of the Persian wars will be made the subject of the work. Professor FAIRBANKS.]

This course is given alternately with Course 9.

[11. GREEK ART—An introduction to Greek architecture, sculpture, vase-painting, and the minor arts. The library is rapidly obtaining the standard books necessary for this work, and already a good collection of slides is available to illustrate the lectures. Professor FAIRBANKS.]

Two hours a week.

This course was given in 1900-1901, and will be repeated in 1902-1903.

12. GREEK AND ROMAN MYTHOLOGY—Lectures on the origin and transmission of myths; a study of the more important myths of Greece and Rome; and an investigation of the influence of classic myths on later literature, especially English literature. The course is designed for students of literature, as well as for those who may expect to teach either Latin or Greek. A knowledge of Greek is not required for this course. Professor FAIRBANKS.

Two hours a week.

C. COURSES FOR GRADUATES ONLY

13. GREEK DRAMA III: ARISTOPHANES—A study of the extant comedies of Aristophanes, with special reference to the light they throw on the different phases of Greek life. Several comedies are read by the class together, and the remainder are made the subject of reports by individuals. Each member of the class is assigned a topic on which he prepares a careful paper embodying the results of his own research. Professor FAIRBANKS.

Two hours a week and an additional hour at the pleasure of the instructor.

This course is given alternately with course 14.

[14. PINDAR AND THE LYRIC POETS—The more important fragments of lyric poetry are read, and the extant poems of Pindar are made the subject of special study. Professor CALL.]

This course will be given in 1902-1903.

15. ARCHÆOLOGY—A special course on some topic in archæology is offered for advanced students. For 1901-1902 the subject will probably be Greek vase-painting. Professor FAIRBANKS.

16. A course in beginning Sanscrit will be offered in case it is desired by a sufficient number of students.

During the current year (1901-1902) a series of illustrated lectures has been given before the University by Professor Fairbanks on subjects connected with classical art and archæology. Six of these lectures were on the general subject of Greek sculpture, and single lectures were given on Excavation in Greece, on Troy and the Cities of Homer, and on other subjects. A similar course will be given next year, probably on the general subject of Greek Mythology and Religion.

A class in the Greek New Testament will be organized by Professor Fairbanks, and all students of Greek are urged to join it. The class will meet once a week, and no registration is required. The writings of John will be studied in 1901-1902.

A Greek Club, composed of instructors and graduate students, was organized in January of the current year and has held weekly meetings at the house of an instructor. During the present year the writings of Sophocles have been read and discussed by the club. Next year it is proposed to continue the study of the Greek drama.

LATIN LANGUAGE AND LITERATURE

PROFESSOR CURRIER; ASSISTANT PROFESSOR POTTER, MISS

HUGHES, MISS PAINE.

The minimum prerequisite for work leading to an advanced degree is the full preparatory work for the classical course and the three courses of the freshman and sophomore years: Livy; Cicero's *De Amicitia*, *De Senectute*, and *Tusculan Disputations*; Terence's *Phormio*; Vergil's *Georgics, Book IV*; Pliny's *Letters*; Tacitus's *Germania* and *Agricola*; and Horace's *Odes, Satires, and Epistles*.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

6. CICERO, DE ORATORE; QUINTILIAN, BOOKS X AND XII; TACITUS, DE ORATORIBUS—Particular attention will be paid to literary criticism as exemplified in these authors. Professor CURRIER.

1901-1902; Tu., Th., at 8:00.

7. TACITUS, Annals and Histories; SENECA, Morals and Letters. Professor CURRIER.

1902-1903; Tu., Th., at 8:00.

8. PLAUTUS—In this course the metres are carefully studied and some attention is given to the ante-classical forms and constructions, but as provision is made in other courses (20, 21) for a more systematic study of the language the attention is directed mainly to the Roman stage and to contemporary and later Roman playwrights. The *Captivi*, *Trinummus*, *Menaechmi*, and *Rudens* are read together with selected scenes from the *Amphitruo*, *Miles Gloriosus*, and *Pseudolus*. The analysis of several other plays is given in informal lectures. Assistant Professor POTTER.

Fall, 1901; Mon., Wed., Fri.

9. CICERO'S LETTERS—As the student before taking this course will have acquired considerable facility in reading Latin, the attention will be directed to the importance of the letters as historical documents. A large number of letters will be studied, selected with reference to the light that they throw on the many-sided character of the orator and also on the social and political conditions that prevailed at Rome at the end of the Republican period. Assistant Professor POTTER.

Fall, 1902; Mon., Wed., Fri.

10. LUCRETIVUS AND CATULLUS—The aim is to study Lucretius's art rather than his philosophical system. All the more poetic passages in the *De Rerum Natura* are read. In this course and also in courses 11-13 considerable attention is given to the structure of the verse and to the reading of it. Catullus is studied particularly in his relation to his successors in lyric, epic, elegiac, and epigrammatic poetry. Assistant Professor POTTER.

Winter, 1902; Mon., Wed., Fri.

11. LUCAN, THE PHARSALIA—As an historical introduction to the course in Lucan considerable portions of *Cæsar's Civil War* will be rapidly read. Or

SENECA'S TRAGEDIES—Introductory lectures in this course treat of the Roman tragic writers who preceded Seneca and of the general attitude of the Romans toward tragic composition. As the plays are read an effort is made to show the relation of the Roman to the Greek writers. Assistant Professor POTTER.

Winter, 1903; Mon., Wed., Fri.

12. **TIBULLUS AND PROPERTIUS**—The best poems of these writers will be read together with a few elegics of Ovid. The larger part of the term is given to Propertius. Assistant Professor POTTER.

Spring, 1902; Mon., Wed., Fri.

13. **THE SATIRES OF JUVENAL. THE EPIGRAMS OF MARTIAL**—The course will include incidentally a study of the private life and amusements of the Romans as set forth in these poems. Assistant Professor POTTER.

Spring, 1903; Mon., Wed., Fri.

14. **CÆSAR AND VERGIL**—This course and the following are intended to meet the needs of prospective Latin teachers and others who wish to gain some familiarity with the methods of original research. The fall term is devoted to syntactical and historical studies covering Cæsar's *Gallic War* (seven books). The work of the winter and spring terms consists of literary studies covering Vergil's complete works, but most of the time is devoted to the *Æneid*. The course presupposes a reading knowledge of these authors, and students expecting to take it in 1901-1902 are advised to take the reading course in *Æneid VII-XII* offered in the summer term, 1901. Open to students who have taken or are taking course 8 or 9. Assistant Professor POTTER.

Throughout the year; Mon., Wed., Fri.

15. **CICERO'S CAREER AS AN ORATOR**—This course combines original historical investigation covering the period from the time of the Gracchi till the death of Cicero, with the study of the orations, all of which will be considered in chronological order. About thirty of the best speeches will be read by the class. One term is devoted to a special study of the conspiracies of Catiline, based largely on Sallust, Asconius, and Cicero's Letters. Prerequisite, courses 9 and 14. Assistant Professor POTTER.

Throughout the year; Tu., Thu., 1901-1902.

16. **HISTORY OF ROMAN LITERATURE**—The reading by the class of suitable selections will be supplemented by informal lectures on the history of the literature.

Fall, Early Latin metrical inscriptions and poetry; winter, Lucilius and the Menippean satirists Varro, Petronius, Seneca; spring, Late Latin; Apuleius's *Cupid and Psyche*, selections from Suetonius and the Christian Hymns. Prerequisite, course 8 or course 9. Assistant Professor POTTER.

To be given 1902-1903; Tu., Thu.

17. **ROMAN ANTIQUITIES**—A systematic study of private life and of legal and political antiquities. Professor CURRIER or Assistant Professor POTTER.

Two hours a week at 2:30.

Throughout the year; Tu., Thu.

18. **CICERO, LIVY, AND OVID**—Sight reading of suitable selections. Professor CURRIER.

One hour a week.

19. **TEACHERS' COURSE**—This course will combine theory practice, and investigation. The members of the class will serve as assistant teachers in a beginning Latin class, and investigate assigned problems. The course is intended for students who have had no experience in teaching Latin. Prerequisites, course 14 and General Psychology. Assistant Professor POTTER.

Five times a week (three hours credit). Winter and spring.

C. COURSES OPEN TO GRADUATES ONLY

20. **HISTORICAL LATIN GRAMMAR ON THE SIDE OF SOUNDS AND INFLECTIONS**—This course will be based on the reading of inscriptions selected for their linguistic interest and arranged chronologically from the earliest time to the seventh century, A. D. Each member of the class will be assigned some definite problem to investigate and report upon.

Prerequisite, course 14 or course 16. Assistant Professor POTTER.

To be given 1901-1902.

21. **LATIN SYNTAX**—Introduction to the study of historical syntax. Assistant Professor POTTER.

Prerequisite, course 14 or course 16.

22. **SEMINAR IN ARCHÆOLOGY**—Subject for 1902-1903: The Topography and Archæology of Rome and the vicinity.

A reading knowledge of German or French is essential. Professor CURRIER.

The instructors of the Latin department meet once a week throughout the year to read in course and discuss informally the entire works of some author or period. Students who have to their credit forty term hours of college Latin will be invited to participate in these meetings.

The department is well supplied with mounted photographs and lantern slides for the illustration of lectures, readings, and especially of courses 17 and 22.

Graduates who offer Latin as their major are not required to take Greek as a minor, but they are strongly urged to do so. A working knowledge of Greek, as well as of French and German, is of course required of candidates for the doctor's degree.

FRENCH LANGUAGE AND LITERATURE

PROF. VAN STEENDEREN; MR. BATCHELDER

Aside from the general requirements for admission to the Graduate College, the candidate for an advanced degree, representing this department either in major or in minor subjects, must have completed courses 1, 2 and 3 as announced in the University Calendar for 1901; that is, he is expected to know the essentials of French grammar, to be able to read modern French prose, and to translate English into French with fair ability.

Besides the completion of courses offered below, the candidate must, if Romance is chosen as the major study, follow a course of original study, the subject of which is chosen under the advice of the professor in charge, and the results of which must be embodied in a thesis.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

4. HISTORY OF FRENCH LITERATURE—A general survey of French literature. This course consists not only of the historical outline, but also of the study, more or less rapid, of specimens from every period. It prepares for the intelligent and more detailed study of special periods and movements. Professor VAN STEENDEREN.

Throughout the year; two hours a week.

5. TWELVE REPRESENTATIVE FRENCH DRAMAS—*Le Cid, Les Precieuses ridicules, Phedre, Zaire, Le Barbier de*

Seville, Hernani, Ruy Blas, La Question d'argent, Bataille de Dames, Le Monde on l'on s'ennuie, Cyrano de Bergerac, L'Aiglon.

The subject is presented by lectures and reading from the standpoint of historical sequence and organic development.
Mr. BATCHELDER.

Throughout the year, three hours a week.

6. FRENCH LYRICS—A study of French lyric poetry from the standpoint of historical development as well as from that of critical appreciation. The selections studied range from the fourteenth century to the present time. The course is given in French. Professor VAN STEENDEREN.

Fall term, three hours a week.

C. COURSES OPEN TO GRADUATES ONLY

7. OLD FRENCH—A course in the reading of Old French verse and prose through Leon Gautier's *La Chanson de Roland* and Cledat's *Auteurs francais du moyen age*. Professor VAN STEENDEREN.

Throughout the year, two hours a week.

8. FRENCH SEMINARY—Courses in the critical study of literary periods and movements. The following are offered:

- a. A course in the Literature of the XVII century;
- b. A course in the Romantic Movement in France;
- c. A course in the Principles of French Criticism; and
- d. A course in Advanced Composition.

During the year 1901-1902 course "c" will be given. Professor VAN STEENDEREN.

Throughout the year, two hours a week.

GERMAN LANGUAGE AND LITERATURE

PROFESSOR WILSON; MR. STURM, DR. EASTMAN.

Courses 3 and 4 may not, under any circumstances, be counted towards an advanced degree by anyone whose major study is in Germanics. They may, however, be counted in partial fulfillment of a minor requirement in German, provided they do not duplicate work already done by the candidate, and provided, further, that the candidate complete also a satisfactory amount of the graduate courses designated by the numbers 5, 6, 7, 8, and 9.

Courses 5 and 8 are open to graduate students who have completed at least three years of German of collegiate grade as regards instruction, and to such other students as are, in the opinion of the instructors in charge of the courses, prepared to carry the work with profit. In every case the instructor and the head of the department should be consulted.

To take courses 6 and 7 with advantage, graduate students should have completed four years of German of collegiate grade, and should not only possess a sufficient knowledge of German to enable them to read the German philological journals with facility, but should also show evidence of capacity for independent work. It would be well, particularly for applicants for course 7, to have had instruction in Old English, Gothic, or Old Saxon. Such other students as are, in the opinion of the instructors, prepared to carry the work, may enter the classes. In every case, however, the instructor and the head of the department should be consulted.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

3. NINETEENTH CENTURY AUTHORS AND GERMAN LYRICS—For restriction, see preliminary statement. In the first term some such work as Scheffel's *Ekkhard* is read and discussed as a piece of literary art. During the second term selections from Heine's prose writings are read, and the instructor reads and interprets Heine's poetry, believing that lyric poetry should be heard. An introduction to German lyrics is thus made, which are taken up in such a way as to give the student a general idea of the historical development of the German lyric from the sixteenth century to the present. The work includes lectures on German verse with special reference to the most important poets studied. Professor WILSON.

Throughout the year; Mon., Wed., Fri., at 11:00.

4. GOETHE, LESSING, AND HISTORY OF GERMAN LITERATURE—For restriction, see preliminary statement. During the first term *Faust*, Part I, with an outline of Part II, constitutes the work; the main object being to help the student to the enjoyment of *Faust* as poetry. Careful attention is, however, given to its ethical import and its artistic character as a piece of literature possessing unity of purpose. Lessing's *Nathan der Weise* is then studied as an application of the author's principles of criticism, and as a message from a leader of advanced thought. The year closes with Francke's *Social Forces*

in German Literature. An attempt is now made to give the student a general idea of the growth and decay of literary tendencies, and to show the relation of literary to social, political, and religious history. Professor WILSON.

Throughout the year; Tu., Th., at 11:00.

5. GERMAN SEMINAR—For requirements, see preliminary statement. This course is for the study and discussion of the works of special periods, of literary tendencies, or of special subjects in the history of German literature. The nature of the work is indicated by the topics that have been treated in previous years: The Faust books; Goethe's *Faust*; Goethe's Youth, including some account of the friends who were connected with his literary development; the Storm and Stress period; the Romantic School; Lessing as Dramatist; Lessing as Critic; Schiller's *Wallenstein*; Goethe's Period of Classical Sympathies; Elements of Historical German Grammar; and the Literary Co-operation of Goethe and Schiller. This course lends itself to investigation and research. For instance, the subject last named comprehends a detailed examination of various questions involved in the literary relationship of Goethe and Schiller, as revealed in their correspondence and in that of their contemporaries. Each member of the Seminar undertakes, under the personal direction of the instructor, the examination of some special phase of the general subject, and makes regular reports upon the results obtained. Professor WILSON.

Throughout the year; Tu., Th., at 9.00.

6. MIDDLE HIGH GERMAN—For requirements, see preliminary statement. Michels's *Mittelhochdeutsches Elementarbuch*, Bachmann's *Mittelhochdeutsches Lesebuch*, and Paul's *Mittelhochdeutsche Grammatik* are used as guides. The course includes a rapid survey of Middle High German forms, a comparative study of Middle High German and New High German syntax in connection with the text, and yields incidentally through translation into New High German excellent practice in composition. Epic, lyric, and didactic poetry, and prose are studied. Epic poetry is represented by selections from the *Nibelungenlied*, *Gudrun*, *Rosengarten*, *Reinhart Fuchs*, *Alexanderlied*, and from Hartmann von Aue, Wolfram von Eschenbach, Gottfried von Strassburg, and numerous minor poets; in lyric poetry the work centers around Walther von der Vogelweide, and includes also representative poems from Der von Kuerenberg, Dietmar von Aist, Reinmar von

Hagenau, Ulrich von Singenberg, Neidhart von Reuenthal, and the Mystics; the work in didactic poetry is based upon Spervogel, Winsbeke, Freidank's *Bescheidenheit*, sayings, fables, etc. Prose is studied in three classes: religious prose, represented by a sermon of Berthold von Regensburg; historical prose, represented by selections from the oldest German *Jahrbuch* of Zurich; legal prose, represented by passages from the *Schwabenspiegel*. Professor WILSON.

Throughout the year; Tu., Th., at 10.00.

7. OLD HIGH GERMAN—For requirements, see preliminary statement. Throughout this course attention is given to the historical aspect of the subject, and the position and the relationship of the Old High German dialects are defined. The work is based upon Braune's *Althochdeutsche Grammatik*, Braune's *Althochdeutsches Lesebuch*, Streitberg's *Urgermanische Grammatik*, and Enneccerus's photo-lithographic facsimiles: *Die aeltesten deutschen Sprach-Denkmaeler*. The reading in prose consists of selections from the Tatian *Evangelienharmonie*, *Benediktiner Regel*, Isidor, Notker's translation of *Boethius de consolatione philosophiae*, and the *Trierer capitulare*. In poetry the following are read: *Hildebrandslied*, *Muspilli*, *Wessobrunner Gebet*, *Merseburger Zaubersprueche*, *Ludwigslied*, and selections from Otfrid's *Evangelienbuch*. Dr. EASTMAN.

Throughout the year, two hours a week; time to be arranged.

8. THE GERMAN ROMANTIC MOVEMENT—For requirements, see preliminary statement. The course is opened with introductory lectures on the general subject, and then follow lectures on the life and earlier works of Tieck, with readings assigned to each student, who is expected to report to the class an outline of the ground covered by his reading, and the results of his study. The works of the Schlegels are taken up in the same manner, after an introduction consisting of four or five lectures. Novalis's *Heinrich von Oesterdingen*, *Hymnen an die Nacht*, and *Geistliche Lieder*, are next read and discussed. After this there are assigned readings in the works of Brentano, Arnim, Kleist, Eichendorff, and Hoffmann. The course is closed with lectures giving a survey of the movement as a whole, with special reference to its social and literary aspects. Mr. STURM.

Throughout the year, two hours a week; time to be arranged.

9. SPECIAL WORK—For graduate students who may wish

to offer additional combinations, special courses will be outlined, and assistance can be rendered such persons in directing their work in the library.

The German department of the library is particularly rich in the history of German literature, the history of the German language, Goethe literature, including Faust, Middle High German, Old High German, and complete sets of the most important German philological periodicals.

Attention is called to the fact that special certificates as to scholarship in German are granted to graduates, on examination, on conditions that will be fully explained by the professor of German.

Graduate students will find it to their advantage to combine with their work in German some of the courses offered in the Scandinavian languages and literatures.

SCANDINAVIAN PHILOLOGY

DR. FLOM.

The graduate instruction offered in the department of Scandinavian Languages will for the present be confined to the philology of these languages. A knowledge of Old Norse is essential to the thorough understanding of the other Germanic languages and Germanic philology in general. Old Swedish and Old Danish, though inferior from the standpoint of literary interest, are not less important philologically. Two courses will be offered in Old Norse (and Old Icelandic): the one elementary and philological, the other advanced and more literary in character. In the former the interests of the student of German or English philology will be kept constantly in view. This course is also intended to lay a foundation for further study in Scandinavian philology. The course in Old Danish and Old Swedish presupposes a knowledge of Old Norse and the principles of Germanic philology. Courses are also offered in the History of the Scandinavian Languages and in Scandinavian Influence on English. The latter should be of special interest to students of English philology. It is the purpose of this course to go, rather in detail, into the linguistic relations of English and Scandinavian. After introductory lectures on English dialects, in which special attention will be paid to Northern English, certain works will be assigned for investiga-

tion. The form and distribution of words will be studied, and their dialectal provenience determined as near as may be.

A knowledge of Modern Norse, though not necessary, will be helpful in course 5. Course 8 presupposes course 5. The student who would take up course 9 must have an elementary knowledge of Modern Danish and Swedish. Courses 8, 9, and 10 are for graduates only. Course 10 presupposes a good knowledge of Old Norse and of Old English phonology.

A course in Old Norse is given every year; course 5, in 1900-1901; course 8, in 1901-1902. Course 8 or course 9 will be given in 1902-1903.

The following Scandinavian philological and literary periodicals are accessible to students in the University library: *Arkiv for Nordisk Filologi* (complete file), *Aarbøger for Nordisk Oldkyndighed og Historie* (since 1879), *Dania* (complete file), *Det Letterstedtske Tidsskrift*, *Nyt Tidsskrift* (complete file), *Tilskueren*, besides a complete file of the Old Scandinavian texts published by the Samfund til Udgivelse af Gammel Nordisk Literatur.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

5. OLD NORSE AND OLD ICELANDIC—Elementary course. Lectures and recitations. The aim of this course is to equip the student with a good vocabulary, and to acquaint him with the peculiarities of Old Norse phonology, inflexion, and syntax, so as to enable him to read the old prose literature and to use the language for the purpose of comparative study within the Germanic group of languages. Lectures on the relation of Old Norse to East and West Germanic. Sweet's *Primer* will be taken first along with Nygaard's *Udvalg af den Nornene Litteratur*. This is to be followed by Kahle's *Altisländisches Elementarbuch*. In the Spring term *Gunnlaugssaga Orms-tungu* (ed. Mogk) will be read.

Throughout the year; three hours a week. Given in 1900-1901. May be given in 1901-1902.

6. OLD ICELANDIC PROSE LITERATURE—This course is conducted in Norwegian. Nygaard's *Oldnorsk Grammatik* and *Oldnorsk Læsebog* will be taken up first, after which the prose selections in Wimmer's *Oldnordisk Læsebog* will be read.

Two hours a week. Given winter and spring terms, 1901.

7. HISTORY OF THE SCANDINAVIAN LANGUAGES—Lectures in connection with Noreen's *Geschichte der nordischen*

Sprachen in Paul's "Grundriss der germanischen Philologie." Although this course is elementary and may be taken without any previous knowledge of Germanic philology, a knowledge of one of the Scandinavian languages and of German or Gothic is desirable. Course 5 should precede.

Fall and winter terms; two hours a week.

C. COURSES OPEN TO GRADUATES ONLY

8. OLD NORSE. THE ELDER EDDA—This course may be taken only by those who have mastered the elements of the language. The fall term will be given to the reading and interpretation of the mythological lays of the Elder Edda. In the winter and spring terms the heroic lays will be taken up, with a study of Eddic Metre. Lectures on Edda criticism, Jonson's *Eddalieder* will be used, together with Gering's *Glossar zu den Liedern der Edda*. In connection with this course lectures will be given on Old Norse literature. Prerequisite, course 5.

Two hours a week. To be given in 1901-1902.

9. OLD DANISH AND OLD SWEDISH—Lectures and texts. This course will begin with lectures on the relation of East to West Scandinavian and on early dialectal differentiation in Old Danish. First half of the year: Old Danish, Brandt's *Gammeldansk Læsebog*, and Dahlerup's *Det danske Sprogs Historie*. Second half of the year: Old Swedish, Noreen's *Allschwedisches Lesebuch*. Required, courses 1, 2, and 5.

Throughout the year; two hours a week.

10. SCANDINAVIAN INFLUENCE ON ENGLISH—Introductory lectures on early Norse and Danish settlements will be followed by a study of the characteristics of Old Northumbrian as differing from West Saxon. Methods of investigation, loan-word tests, Scandinavian elements in Old and Middle English and Modern English dialects. The dialectal provenience of the loan-words. A part of the spring term will be given to the study of English influence on Scandinavian, especially Old Norse, Modern Norse, and Danish. Required for this course, a knowledge of German, Old Norse, and Old English.

Throughout the year; two hours a week.

ENGLISH

PROFESSOR ANSLEY; ASSISTANT PROFESSOR YOUNG, DR. HAGEN.

Material for advanced study is found in the development and the present status of rhetorical theory; in the history of

schools, movements, tendencies, and writers in our literature, with their relations to each other and to other literatures; in the theory of literary art, as an approach to the science of æsthetics; and in the structure of the language itself in the several stages of its evolution. An advanced degree in English should imply some knowledge of all these subjects, with specialization in one of them.

Candidates for advanced degrees are expected to begin their work with such preparation as is given by the English courses commonly required in colleges of good standing and by what might be assumed as an average amount of elective work in English. The graduate work should include something in such branches of the subject as may have been omitted in undergraduate electives.

Students are assisted individually to determine the particular lines of investigation likely to prove most profitable. Courses of study other than those offered are given as occasion demands.

Work in rhetorical subjects is not announced below. Graduate students wishing such work should consult the head of the department.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

9. THE ENGLISH DRAMA BEFORE SHAKESPEARE—The selections in Manly's *Spectmens of the Pre-Shakespearean Drama* are made the basis of this work. In studying the Miracle Plays each play is compared with its correspondent in the other cycles or with corresponding isolated plays. The student is thus made familiar with the character and the range of this interesting form of the drama. The Moralities and Interludes are studied in their relations to earlier and later dramatic forms; and the early renaissance plays give occasion for a study of classical influence, special attention being given to Seneca. Dr. HAGEN.

Winter and spring terms; two hours a week.

11. SHAKESPEARE—Some elements of literary art exemplified in the plays of Shakespeare. Three representative tragedies are studied in detail. Professor ANSLEY.

Throughout the year; three hours a week.

12. ENGLISH AND SCOTTISH POPULAR BALLADS—Lectures on the origin and nature of ballad poetry, with reading and interpretation of selected ballads. The text used is Gum-

mere's *Old English Ballads*, but students have access also to the collection of Professor Child. Dr. HAGEN.

Fall term; two hours a week.

13. THE ROMANTIC MOVEMENT—The course begins with a study of the origins and the progress of the movement in the eighteenth century, but particular stress is laid on the period beginning with the *Lyrical Ballads* (1798) and ending with the death of Scott (1832). Wordsworth, Coleridge, Byron, Shelley, Keats, and Scott will be studied in representative selections. Dr. HAGEN.

Fall and winter terms; two hours a week.

14. VICTORIAN LITERATURE—Studies in the more significant phases and forms in the development of English literature during the reign of Victoria, such as Pre-Raffaellism, the social ideals of William Morris, and the dominance of criticism and prose fiction. Professor ANSLEY.

Throughout the year; two hours a week.

15. BROWNING—A study of the work of Robert Browning, with especial reference to his philosophy of art and life. This course must be preceded or accompanied by course 6. Professor ANSLEY.

Throughout the year; two hours a week.

19. MIDDLE ENGLISH—Chaucer's *Canterbury Tales* and Langland's *Vision of William Concerning Piers the Plowman*. Lectures on the literary history of the fourteenth century. Dr. HAGEN.

Fall and winter terms; two hours a week.

20. OLD ENGLISH—A study of the structure of Old English, with readings in representative Old English prose and poetry, including *Beowulf*. Assistant Professor YOUNG.

Throughout the year; five hours a week.

21. ADVANCED OLD ENGLISH—Intended for students who have completed course 20. The following poems are read: Cynewulf's *Christ* (Cook's edition); Cynewulf's *Elene* (Kent's edition); *Judith* (Cook's edition). A study of the structure of Old English verse is included in the work. Dr. HAGEN.

Throughout the year; two hours a week.

23. GOTHIC—An introduction to the Gothic language. This is a course in the comparative study of Gothic phonology, morphology, and syntax, with constant reference to other Germanic dialects. Open to students who have a knowledge of Old English or of any other early Germanic dialect.

The following books are used: Wright, *A Primer of the Gothic Language*, second edition, Oxford, 1900; Stamm-Heyne, *Ulfilas*, 9 Aufl., Paderborn, 1896; Uhlenbeck, *Etymologisches Woerterbuch der gotischen Sprache*, 2 Aufl., Amsterdam, 1900; Streitberg, *Urgermanische Grammatik*, Heidelberg, 1896. Dr. HAGEN.

Throughout the year; two hours a week.

24. OLD SAXON—Designed for students who have studied Old English or some other early Germanic dialect. During the first half of the year Holthausen's *Altsaechisches Elementarbuch*, Heidelberg, 1899, is studied. The rest of the year is devoted to the *Heliand*, which is read in the edition of Behaghel or of Piper. Dr. HAGEN.

Throughout the year; two hours a week.

PUBLIC SPEAKING

PROFESSOR GORDON.

The subject of public speaking deserves careful attention at the hands of graduate students. The relation between the history of a nation and the development of public speaking, the history of public speaking in a republic, and the influence of vocal expression upon a nation's literature are some of the subjects that need elucidation at the hands of cultured students.

B. OPEN TO GRADUATES AND UNDERGRADUATES

2. LITERARY INTERPRETATION—The lyric, epic, dramatic, and oratoric forms are studied for vocal expression.

Throughout the year; two hours a week.

3. PUBLIC ADDRESS—The preparation and delivery of an argument as to preliminary reading, structure, evidence, briefing, style, and delivery are carefully developed. The forms of oratory are studied and one or more illustrated by the work of the student.

Throughout the year; three hours a week.

4. DEBATE—This course seeks to develop the handling of refutation in the preparation of briefs and forensics and actual debate.

Throughout the year; two hours a week.

5. ORATORY—Takes up the problems of the audience, the style and atmosphere of the address, and the function of persuasion in speaking.

Fall and winter terms; two hours a week.

6. **THE FUNCTION OF IMAGINATION AND DRAMATIC INSTINCT IN EXPRESSION**—This is of especial value to those who expect to teach.

Throughout the year; one hour a week.

7. **SHAKESPEARE**—A play is studied from the standpoint of vocal expression.

Throughout the year; one hour a week.

8. **DEBATE AND ORATORY**—This course is designed for students desiring special work on selected topics for study and research preparatory to public presentation. Students may schedule for this course at the opening of the fall or the winter term.

Through two terms; two hours a week.

C. OPEN TO GRADUATES ONLY

9. **HISTORY OF ORATORY**—This is a course for individual research work along lines connected with the growth of oratory from the earliest times.

HISTORY

PROFESSOR W. C. WILCOX; MR. PLUM.

Students who wish to do graduate work in History will be expected to have done at least an average amount of undergraduate work in the subject, the more the better. Graduate work is not intended to fill up gaps left in the student's undergraduate course. All who intend to specialize in History should emphasize this subject before taking the bachelor's degree. Before any one can be enrolled as a graduate student in this department the requisite amount of preliminary work must be completed, either before or after receiving the first degree. Those contemplating graduate work in History are urged to elect also courses in economics and politics.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

5. **THE PROTESTANT REVOLUTION IN EUROPE**—Lectures and special assignments. The work of this course will center about the Mediæval Church as a secular institution. The sacred character of the institution and its relation to the individual in society will be studied as a basis for its influence in affairs of government. The early reforms and reformers

within and without the church, especially the attempts of the early Councils, will be considered, as showing the need of the work of Luther and his followers. The work of the Protestants will then be followed down to the treaty of Westphalia.

The aim of the course will be to introduce the student to the literature of the period as far as possible, and to enable him to come in touch with Mediæval thought and life. Mr. PLUM.
Throughout the year; two hours a week.

6. THE HISTORY OF ENGLAND—This course traces the development of English society and the evolution of the English constitution. In the fall term the work consists of a study of early England, together with the Norman and early Angevin periods. In the winter term, beginning with the three Edwards, the work covers the later Angevin, the Lancastrian, the Yorkist and the Tudor periods. The work of the spring term involves a study of the Stuarts and the early Hanoverians. The student who elects this course is expected to have a good outline knowledge of classical and mediæval history.

This work in English History is conducted by topical analyses accompanied by lectures. It is intended primarily for members of the junior and senior classes, but graduate students who wish to specialize in English History can take this course to advantage in connection with the seminar in English History. Professor WILCOX.

Throughout the year; three hours a week.

7. THE HISTORY OF THE UNITED STATES UNDER THE CONSTITUTION—This is a lecture course designed for senior and graduate students. Special topics in research work are assigned for report in connection with the lectures. During the fall term this course traces the development of the constitution from preceding political forms, and involves a study of the forces at work during the Revolution and under the Confederation. In the winter term the work includes a study of the working of the constitution from the establishment of the government under George Washington to the triumph of the democracy under Andrew Jackson. The work of the spring term completes the study from the Whig victory of 1840 to the conclusion of the work of reconstruction after the civil war. Professor WILCOX.

Throughout the year; three hours a week.

8. THE FRENCH REVOLUTION—This course is designed primarily for graduate students in history. Those members of

the senior class who are making a special study of history and who are duly qualified to do the work are also admitted. A thorough knowledge of Mediæval History is an indispensable prerequisite. These lectures on the French Revolution involve a critical study of the revolutionary movement in its general outlines from the first meeting of the States-General in 1789, to the overthrow of the Executive Directory by Napoleon Bonaparte ten years later. Professor WILCOX.

Fall term; two hours a week.

9. THE ERA OF NAPOLEON BONAPARTE IN EUROPE—This is a course of lectures and research studies intended to follow immediately the work of course 8. In it are traced the results of the Revolution as they worked themselves out or were modified under the Consulate and the Empire. The course is designed primarily for graduate students, but duly qualified members of the senior class are also admitted to it. Professor WILCOX.

Winter term; two hours a week.

10. THE NINETEENTH CENTURY IN EUROPE—Beginning with the congress of Vienna in 1815, these lectures trace the European development from the period of reaction and stagnation under the restored Bourbons and Metternich, through the upheavals of 1830, 1848, 1852 and 1870, down to the final consolidation of Germany and Italy. Considerable attention is given to the occurrences of the last thirty years in their relation to the Eastern Question and the present status of Europe. This course is a sequel to courses 8 and 9, and is open to the same classes of advanced students. Professor WILCOX.

Spring term; two hours a week.

C. COURSES OPEN TO GRADUATES ONLY

11. THE SEMINAR IN ENGLISH HISTORY—This work is designed exclusively for those graduate students who are qualified to specialize in English History. All candidates for admission must have completed the courses in Mediæval and English History previously mentioned. The work of the seminar consists of a critical study of early English institutions along lines of independent research. The aims of the seminar are the acquisition of knowledge from original sources, training in handling both primary and secondary authorities and the

development of the ability to organize the results of research in a form suitable for publication. Professor WILCOX.

Throughout the year; two hours, once a week.

12. THE SEMINAR IN UNITED STATES HISTORY—This course is designed for graduate students and a few specially qualified undergraduates. The character of the work varies somewhat from year to year, but is always a detailed study of some collection of original sources. The legitimate aims of seminar work are kept constantly in view. Careful training in historical method accompanies the acquisition of knowledge from primary authorities. Professor WILCOX.

Throughout the year; two hours, once a week.

In addition to the above courses it is expected to offer during the year 1901-1902 and thereafter the following, designed primarily for graduate students:

THE HISTORY OF THE HEBREW PEOPLE—The work of this course will involve a study of all early Semitic life, the development of the Hebrew people being followed as the central theme. The Hebrews will be studied as an Asiatic and Semitic type. Attention will be given to the religious systems of Asia, so far as they throw light upon the social and political development of the people.

THE HISTORY OF ENGLAND IN THE NINETEENTH CENTURY—This course will be arranged as a sequel to course 6 and as supplementary to courses 8, 9, and 10.

THE HISTORY OF THE ENGLISH COLONIES IN AMERICA—This course is designed for those who wish to make a special study of American and United States history. The attempt will be made to treat the history of colonization in America both before and after the English became supreme.

POLITICAL SCIENCE

PROFESSOR SHAMBAUGH.

Candidates for the advanced degree of Master of Arts or Doctor of Philosophy in any of the lines of study comprehended by the department of Political Science are offered the following regular courses of instruction. Additional courses in the general field of politics will be outlined by the head of the department to meet the special demands of individual candidates.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

2. THE HISTORICAL BASIS OF GOVERNMENT IN THE UNITED STATES—A study of the sources and the early development of government in the United States. Herein our Anglo-Saxon inheritances, government in the Colonies, the growth of federalism, and the establishment of the first state governments will be considered. The following documents will be studied and analyzed: Magna Charta, the Act of Habeas Corpus, the Petition of Right, the Bill of Rights, Colonial Charters, Plans for Union, Articles of Confederation, Declaration of Independence, the First State Constitutions, and the Constitution of the United States.

Fall term, three hours; Mon., Wed., Fri.

3. POLITICAL PARTIES—A study in the practical workings of American government, wherein the history, organization, operation, and influence of political parties will be discussed.

Winter term, three hours; Mon., Wed., Fri.

4. LOCAL GOVERNMENT—A study of local government in the United States, wherein the development of the several forms of township, county, and township-county government will receive special consideration.

Spring term, three hours; Mon., Wed., Fri.

5. ELEMENTS OF JURISPRUDENCE—A study of the nature, definition, classification, and divisions of law. The course will include lectures on the history and fundamental principles of the Civil Law of Rome and the Common Law of England. The discussions will be largely non-technical.

Fall term, three hours; Mon., Wed., Fri.

6. AMERICAN CONSTITUTIONAL LAW—A study of the nature, principles, and powers of government in the United States as reflected in written constitutions and in judicial interpretation. Leading cases in constitutional law will be read and discussed.

Winter term, three hours; Mon., Wed., Fri.

7. GOVERNMENT IN IOWA—A course of lectures on the history of government in the commonwealth of Iowa.

Spring term, three hours; Mon., Wed., Fri.

8. AMERICAN POLITICAL THEORY—A course of lectures on American political ideas and ideals, wherein leading state

papers will be analyzed and the political theories of such representative American thinkers as William Penn, Thomas Paine, Washington, Hamilton, Jefferson, John Adams, Samuel Adams, Madison, Fisher Ames, Marshall, Monroe, Webster, Calhoun, Clay, Alexander Stephens, and Lincoln will be discussed and criticised.

Throughout the year; two hours, Tu., Th.

C. COURSES OPEN TO GRADUATES ONLY

9. **COMPARATIVE CONSTITUTIONAL LAW**—A critical study of the leading constitutions of Europe and America, wherein the general and theoretical aspects of government will be considered.

Fall term, two hours; time to be arranged.

10. **ADMINISTRATIVE LAW**—A comparative study of administrative law in France, Germany, England, and the United States.

Winter term, two hours; time to be arranged.

11. **POLITICAL THEORY**—In this course a system of pure political theory will be outlined and correlated with philosophy.

12. **SEMINAR IN POLITICAL SCIENCE**—In 1901-1902 selected subjects in American political theory will be assigned for critical study and discussion.

13. **SEMINAR IN IOWA HISTORY AND POLITICS**—This seminar is intended for all those who are engaged in research work in Iowa history and politics.

SOCIOLOGY AND POLITICAL PHILOSOPHY

PROFESSOR LOOS; MR. CADY.

Undergraduate preparation for the study of Sociology may best be made by electing certain courses in Economics and History. Economics 2 or 3, and History 1, 2, and 6, in the school of political and social science, are especially recommended for such preparation. In preparing for political philosophy, Politics 1 and Sociology 1 and 2 are recommended in addition as preliminary courses.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

1. **SOCIOLOGY**—The Principles of Sociology. A study of the primary factors and forces of social phenomena with introductory lectures on anthropology and ethnology, followed

by a systematic examination of the genesis of social institutions - gentile and civic. The course closes with a brief review of social theory from Plato to Spencer. Professor LOOS.

Fall term; Mon., Wed., Fri., at 9:00.

2. **SOCIOLOGY—Applied Sociology.** In this course an attempt is made to apply the principles of sociology in the consideration of present problems of society in the sphere of police, sanitation, charities, and correction. Careful attention is given to the psychic factors, to the will and knowledge, and to the importance of education and the modification of environment as factors in social progress and social amelioration, counteracting mal-heredity and unfavorable environment. Professor LOOS and Mr. CADY.

Winter term; Mon., Wed., Fri., at 9:00.

3. **SOCIOLOGY—A continuance of course 2 with special reference to the economic and social problems of modern cities.** Professor LOOS and Mr. CADY.

Spring term; Mon., Wed., Fri., at 9:00.

4. **THE INDUSTRIAL REVOLUTION IN ITS SOCIAL ASPECTS—A study in recent social history and political philosophy, an analysis of the industrial revolution in its social aspects, with special attention to the development of the individualistic philosophy and its reaction on practical politics and legislation. The course will open with introductory lectures on culture, history, and the economic foundations of society** Professor LOOS.

Fall term; Mon., Wed., Fri., at 11:00.

5. **SOCIALISM AND CONTEMPORARY SOCIAL LEGISLATION—A critical examination of contemporary socialism and current tendencies in legislation, 1860-1900. Special attention will be given to modern labor legislation and to the problem of monopolies and trusts.** Professor LOOS.

Winter term; Mon., Wed., Fri., at 11:00.

6. **INTERNATIONAL LAW—The nature and sources of international law. The equality of states in law and in fact. The rules of war and peace. The conflict of laws. For this course the College of Law allows credit to those who are registered in the combined collegiate and law course of study. Open to juniors, seniors, and professional students.** Professor LOOS.

Spring term; Mon., Wed., Fri., at 11:00.

C. COURSES OPEN TO GRADUATES ONLY

7. **POLITICAL PHILOSOPHY**—A study of political philosophy with special reference to modern conditions and problems. During the fall term the class will read Spencer's *Man vs. the State*, Huxley's *Administrative Nihilism*, Plato's *Republic*, Aristotle's *Politics*, and selections from the writings of Thomas Hill Green and other modern philosophers. This will be followed by a course of lectures presenting a systematic sketch of the development of political philosophy and the elements of legal history during the winter term, and a more special examination of the current dogmas of individualism and socialism during the spring term. Professor LOOS.

Throughout the year; two hours, time to be arranged.

8. **GRADUATE SEMINARY IN SOCIOLOGY**—Designed to assist graduate students in original and advanced lines of research. The ethnological and social conditions of the island populations of the United States will form the principal subject of inquiry for the year 1901-1902. Professor LOOS.

Throughout the year; time to be arranged.

ECONOMICS

PROFESSOR LOOS; DR. PATTERSON, MR. CONNER.

Candidates for advanced degrees in the Graduate College who elect Economics as major or minor are requested to confer with the professor in charge for the suitable grouping of the courses here offered.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

3. **POLITICAL ECONOMY**—An advanced course. This course treats primarily of the organization of modern industry. It will be introduced by a brief study of the nature, scope, and fundamental concepts of economic science. Competition, speculation, combination of capital, panics, and depressions will be among the topics considered. Required readings in Hadley and Marshall. Dr. PATTERSON.

Fall term; Mon., Wed., Fri., at 9:00.

4. **PUBLIC FINANCE AND TAXATION**—This course is designed as a continuation of course 3. The work opened by a brief consideration of public expenditure, public income, and public debts will center in an intensive study of taxation: (1)

principles of; (2) methods and systems of, with a special reference to incidence; (3) revenue systems of the United States and of Iowa. Assigned readings in Seligman's *Essays on Taxation* and other works, with special assignments of topics for reports to be prepared from original sources. Dr. PATTERSON.

Winter and spring terms; Mon., Wed., Fri., at 9:00.

5. STATISTICS—Lectures and investigation. A study of population in Europe and America, grouped under the heads: structure of the population, numbers, density, races and nationalities, sex, age, conjugal condition, and occupation. Growth of population: natural increase; births, intensity; sexes, nationality; marriages, intensity, age, productivity; deaths, intensity, sex, age, causes, epidemics, and suicides. Immigration and emigration. Population in its economic aspects, agriculture, mining, manufacturing, commerce, railroads, banks, money, prices, wages, consumption. Population in its social aspects, education, pauperism, and crime.

Readings in the literature of the subject will be assigned, and special care taken to acquaint the student with the practical use of the principal governmental publications bearing on the subjects discussed. Dr. PATTERSON.

Throughout the year; Tu., Th., at 11:00.

6. DEBATING COURSE—Selected topics in economics, politics, and sociology. Open only to students who have taken at least one course in one of these subjects. Two hours throughout two terms. Students may schedule for this course at the opening of the fall term and again at the opening of the winter term; those who begin the course in the fall term continue it through the winter term and those who begin it in the winter term must carry it through the spring term in order to receive credit. Professors LOOS and WILCOX, and Dr. PATTERSON.

Two terms; hours to be arranged.

NOTE—Students desiring formal instruction in the art of debate are advised to elect Public Speaking 4, in charge of Professor Gordon. For further explanation of the relations of Economics 6 to the courses in Public Speaking students are referred to Professor Gordon or to the professors in charge of Economics 6. Compare also Public Speaking 8.

7. COMMERCIAL GEOGRAPHY AND THE CONSULAR SERVICE—During the year 1900-1901 this course was given as part of a course in international law running through the winter and spring terms, by Mr. J. E. Conner. Hereafter it will probably be given as an independent course.

Time to be arranged.

8. **TRANSPORTATION**—This course will deal chiefly with railways; railroad organization and management, explanation of terms in common use in railroad accounts and reports, history of railroad development, discussion of rates, competition, discrimination, state management, (Hadley's *Railroad Transportation*), and the commission system—state and interstate. Dr. PATTERSON.

Winter and spring terms; Tu., Th., at 9:00.

THE INDUSTRIAL REVOLUTION IN ITS SOCIAL ASPECTS AND CONTEMPORARY SOCIALISM—See Sociology and Political Philosophy, 4 and 5. Professor LOOS.

NOTE—Additional courses in commerce and industrial history, including courses in money, banking, insurance, and similar subjects, can probably be announced before September, 1901.

C. COURSES OPEN TO GRADUATES ONLY

9. **ADVANCED ECONOMIC THEORY**—Lectures and readings. The rise and development of the classical school of economists will first be considered. This will be followed by a study of the recent development of political economy. Portions of Adam Smith's *Wealth of Nations*, Malthus's *Essays on Population*, Ricardo's *Political Economy*, and Cairne's *Leading Principles* will be read by the class. Later the writings of Marshall, Patten, and Clark will be considered, as showing the recent development of the theory of rent and the newer aspects of the science. Dr. PATTERSON.

Throughout the year; two hours a week, time to be arranged.

10. **HISTORY AND THEORY OF STATISTICS**—A study of the development of the statistical method and theory. The history, organization, and function of statistical agencies at home and abroad. The methods employed by the census department and labor bureaus will be studied and criticised. Dr. PATTERSON.

Fall and winter; two hours, once a week.

PHILOSOPHY

**PROFESSOR PATRICK; ASSISTANT PROFESSOR SEASHORE,
DR. BAWDEN, MISS WILLIAMS.**

This department offers opportunity for advanced study in the following subjects: Psychology, History of Philosophy, Logic and Metaphysic, Ethics, Æsthetics, and the History and

Philosophy of Religion. Candidates for the degree of Master of Arts or Master of Science having the required preparation for advanced work may elect any one of these subjects for either a major or a minor course, subject to the rules for graduate students. Candidates for the degree of Doctor of Philosophy, while selecting one subject for special research will be expected to gain a comprehensive knowledge of all the subjects in this group. As examples of subjects for special research, or for *theses*, may be mentioned problems in experimental or physiological psychology, the methods and results of child study, epistemology, special periods and subjects in the history of philosophy, etc.

Candidates for advanced degrees in this department should have taken as undergraduate work in this institution, or in another of like rank, a general elementary course in psychology, a course in logic and a course in ethics. An introductory course in the history of philosophy is also very desirable for preparation. Graduate students not candidates for a degree may take any course for which they are prepared, upon the approval of the instructor.

The new rooms for the Psychological Laboratory and the department of Philosophy on the second floor of the Hall of Liberal Arts will be occupied during the present year. They include two lecture rooms, a large library and seminar room five commodious laboratory rooms, a work shop, a dark room, and two private offices for instructors. A description of the laboratory and apparatus may be found in this announcement under the head of Material Equipment.

The University of Iowa Studies in Psychology is a biennial bulletin published by the University and devoted to original contributions to psychological science. The articles are contributed by the graduate students and instructors of the department.

The philosophical library is supplied with all the standard works in philosophy, psychology, ethics and logic, and with the bound volumes and current numbers of the leading philosophical and psychological journals of America, England, Germany, and France.

The following courses are offered for the year 1901-1902.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

5. LABORATORY COURSE IN EXPERIMENTAL PSYCHOLOGY—The exercises are so arranged as to familiarize the stu-

dent with the methods, the apparatus, and the results of typical experiments in each of the approved lines of psychological research. Two periods are spent on each problem. During the first the experiment is performed by each individual, the class being divided into groups of two. During the second the results and the literature on the subject are discussed on the seminar plan. The manual of the course is furnished in mimeograph copies. Dr. SEASHORE and Miss WILLIAMS.

Throughout the year; two hours a week.

6. HISTORY OF PHILOSOPHY—A course in Greek, mediæval and modern philosophy. Lectures with assigned reading in the texts of Zeller, Weber, Falckenberg, Erdmann, and Windelband. Professor PATRICK.

Throughout the year; three hours a week.

7. COMPARATIVE PSYCHOLOGY—The evolution of animal consciousness; an introduction to the study of genetic psychology. The following topics will be discussed: The problem and method of comparative psychology; the psychic life of micro-organisms; plant and animal tropisms; the criterion for the presence of consciousness in the lower animals; instinct and reason; the psychogenesis of the various senses; comparison of animal and human consciousness. Dr. BAWDEN.

Fall term; three hours a week.

8. PSYCHOLOGY OF THE CHILD—The physical and mental growth of the child. The theory of recapitulation. The child type. The laws of mental development, and the mental characteristics of infancy, childhood, and adolescence. The lectures in this course will be supplemented by reading in the extensive literature of the subject and by reports from members of the class upon special subjects, such as imitation, interest, play, the color sense, etc. Prerequisite, course 4, or some other introduction to psychology. Professor PATRICK.

Winter term; three hours a week.

9. ABNORMAL PSYCHOLOGY—A general survey of abnormal mental phenomena and their laws. Abnormal perception, memory, imagination, reasoning, will, and feeling will be discussed with reference to the explanation of sleep, hypnosis, illusions, automatisms, alterations of personality, insanity, degeneracy, and crime. Lectures and reading. Dr. SEASHORE.

Spring term; three hours a week.

C. GRADUATE COURSES

10. INTRODUCTION TO METAPHYSICS—SEMINAR—Theories of reality with a critical examination of materialism. Professor PATRICK.

Fall term; two hours a week.

11. PHILOSOPHY OF THEISM—SEMINAR—The conception of God in the religions of the Hindoos, Persians, Egyptians, Jews, Greeks, in the Christian religion, and in modern thought. Final causes. The bearing of evolution upon theism. Pantheism. Professor PATRICK.

Winter term; two hours a week.

12. HISTORY AND PHILOSOPHY OF MYSTICISM—SEMINAR—The chief ancient, mediæval, and modern mystics will be studied and the principal mystic writings will be examined. Vaughan's *Hours With the Mystics*, Racejac's *The Bases of the Mystic Knowledge*, and Inge's *Christian Mysticism* will be used as text-books. Professor PATRICK.

Spring term; two hours a week.

13. ADVANCED ETHICS—This course will be both historical and constructively critical. It will begin with a consideration of the ethical problem and standpoint and proceed to an examination of fundamental ethical principles and the typical ethical theories. It will include a discussion of the moral ideal, the moral standard, the moral struggle, and the problem of freedom and responsibility. Dr. BAWDEN.

Fall term; two hours a week.

14. HISTORY AND THEORY OF ÆSTHETICS—The history of æsthetic discussion and æsthetic theories from the Greeks to the present time. Analysis and criticism of æsthetic principles and theories from the standpoint of psychology. Lectures and reading. Dr. BAWDEN.

Winter term; two hours a week.

15. MODERN IDEALISM—This will be a lecture course with assigned readings in Kant's *Critique of Pure Reason* and Hegel's *Logic*. The aim will be to show the positive contribution of German idealism to modern thought; (1) by a study of the chief representatives of this movement; and (2) by tracing its influence especially in English and American writers. At the same time an attempt will be made to work out an organic point of view in philosophy which will be consonant both with

the truth in modern idealism and with modern science. Dr. BAWDEN.

Spring term; two hours a week.

16. **ADVANCED PSYCHOLOGY**—A systematic study of the problems of normal, adult, human psychology. Reading, lectures, and discussion. Dr. SEASHORE.

Throughout the year; two hours a week.

17. **SPECIAL RESEARCH IN PSYCHOLOGY**—Original investigations of special problems in psychology. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *University of Iowa Studies in Psychology*. Dr. SEASHORE, Professor PATRICK, and Miss WILLIAMS.

Throughout the year.

18. **EXPERIMENTAL PSYCHOLOGY OF THE CHILD**—A course in the experimental psychology of school children. The purpose is to give training in the methods of experimental child study by making actual investigation of current problems in the development of mind. Dr. SEASHORE.

Spring term; two hours a week.

19. **PROBLEMS IN PSYCHOLOGY**—A course of reading and criticism in the current literature of psychology. A written theme will be required each term. Subjects for 1901-1902: Fall term, Instinct; winter term, Memory; spring term, The Doctrine of Parallelism. Dr. SEASHORE.

Throughout the year; two hours a week.

20. **THE EVOLUTION OF INDIVIDUALISM**—This course will trace the steps by which the ancient emphasis of the institution and the mediæval idea of subjection to external authority have given place to the modern emphasis of individualism and personal freedom. The culmination of individualism in continental and especially in English thought will be studied and the significance of the movement indicated. Seminar method. Dr. BAWDEN.

Spring term; two hours a week.

PEDAGOGY

PROFESSOR MCCONNELL; ASSISTANT PROFESSOR BOLTON,
MR. DORCAS.

The department of pedagogy in its present organization embraces the following more or less distinct branches of University work:

1. The giving of the regular courses of instruction;
2. The direction of the University extension work of the University;
3. The work of the University examiner;
4. The inspectorship of schools.

The head of the department at present offers no course of instruction, but under the authority of the Board of Regents devotes his time to the inspection of schools and to the management of the University extension work of the University; while the instructor in this department divides his time between his duties as University examiner and his courses of instruction in pedagogy.

For University teachers' certificates and supervisors' certificates see these topics.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

6. EDUCATIONAL PSYCHOLOGY—This course forms an introduction to course 7 in the philosophy of education. The course deals with the development and training of the mental powers and the psychological laws underlying educational processes. Among the topics discussed are the following: Meaning of mental development; the education of the nervous system; habit, association, memory, imagination, attention, and apperception from the educational point of view; training in sense perception and observation; self-activity; the emotions and volition in relation to instruction and training; suggestion and imitation as forces in education. Assistant Professor BOLTON.

Fall term; Mon., Wed., Fri., at 10:00.

7. PHILOSOPHY OF EDUCATION—The meaning of education considered from the standpoints of (a) psychology; (b) neurology; (c) biology; (d) anthropology; (e) sociology; varieties of education; varying educational ideals at different times; educational means, educational values; doctrines maintained by the classical writers on education, such as Plato, Comenius,

Pestalozzi, Froebel, Herbart; contemporary writers, such as Hall, Harris, Rein, Dewey, etc. A study of such questions as the culture epochs, correlation, nascent periods, etc. The application of the foregoing to the making of courses of study, and a brief examination of typical existing courses. Assistant Professor BOLTON.

Winter and spring terms; Mon., Wed., Fri., at 10:00.

8. **CHILD STUDY**—The course includes (1) a general survey of the meaning, methods, and scope of child study; (2) a survey of the history of the subject; (3) a careful study of the literature; (4) a discussion of some of the special methods employed; (5) the value of child study to teachers and parents; (6) its bearing upon pedagogy; (7) the assignment of an easy problem for investigation. Assistant Professor BOLTON.

Winter and spring terms; two hours a week.

9. **ORGANIZATION AND ADMINISTRATION**—The problems of organization and administration as they confront the school superintendent or principal. The general powers and duties of the superintendent; the gradation and classification of schools; courses of study and the adjustment of programmes; the relation of the superintendent to patrons, teachers, pupils, and the community. Assistant Professor BOLTON.

Fall term; two hours a week.

10. **SCHOOL SYSTEMS IN THE UNITED STATES**—An examination of typical state and city school systems of the United States. Assistant Professor BOLTON.

Winter term; two hours a week.

11. **FOREIGN SCHOOL SYSTEMS**—A comparative study of the organization and administration of the school systems of Germany, France, England, and Ontario. Consideration will be given to the relations of the schools to the state, organization and equipment of schools, courses of study, training of teachers, success of the system with reference to (a) the development of the individual and (b) the demands of society. Assistant Professor BOLTON.

Spring term; two hours a week.

12. **SEMINAR IN THE THEORY AND PRACTICE OF TEACHING**—Open only to advanced undergraduate students in pedagogy. This course will afford an opportunity for the special investigation of simple educational problems. It will form an

introductory course in seminar methods of research. Assistant Professor BOLTON.

Throughout the year; two hours a week, Tu., 7:00 to 9:00 p. m.

C. COURSES OPEN TO GRADUATES ONLY

***13. PHILOSOPHY OF EDUCATION**—Advanced course. This course will consist of a more detailed and exhaustive study of some of the questions begun in course 7. Lectures will be given indicating the method of approach and outlining the topic, and then students will be expected to study critically through copious reading, sustained reflection, and, in some cases, observation and experimentation. Reports upon prepared topics will be submitted for class discussion. Assistant Professor BOLTON.

Fall and winter terms; two hours a week.

***14. HYGIENE OF INSTRUCTION**—The physical and psychological conditions that promote normal psychic development. The following are typical topics: General facts and laws of growth and development; fatigue and methods of studying it; hygiene of the senses; principles and hygiene of motor training; periods of study, recesses, home study; ventilation, school furniture, and apparatus; the hygiene of reading, writing, singing, arithmetic, etc. Lectures, assigned readings, and reports. Assistant Professor BOLTON.

Spring term; two hours a week.

***15. HERBARTIAN PEDAGOGY**—Herbart's psychological and ethical doctrines in their bearing upon education. A critical consideration of his doctrines of apperception, interest, ethical development, and will training. A sketch of the Herbartian movement in Germany and in America. Teachings of Herbartian disciples. The doctrines of concentration, correlation, and the culture epochs will receive more exhaustive treatment than is possible in course 7. Assistant Professor BOLTON.

Winter term; two hours a week.

***16. READINGS IN GERMAN AND FRENCH PEDAGOGY**—Open only to those who have taken advanced courses in pedagogy, and who have a reading knowledge of these languages sufficient to make them a means of thought-getting. Readings and translations will not be attempted in class; this period will

be devoted to reports upon the thought-content gained through reading. Assistant Professor BOLTON.

Spring term; two hours a week.

***17. CURRENT EDUCATIONAL PROBLEMS**—The topics discussed will necessarily vary somewhat from year to year. An attempt will be made to study carefully the questions that are in the focus of consciousness of the educational public. The following are typical and merely suggestive: electives in high schools and colleges; self-government of pupils; athletics in high schools; manual training; theory of the kindergarten and its public maintenance; transportation of children to school at public expense; state aid to primary and higher education; nature study; child study in the schools; medical inspection of schools; training of teachers, etc. Assistant Professor BOLTON.

Spring term; two hours a week.

***18. HISTORY OF EDUCATION**—Advanced course. Open only to those who have taken course 3 in this subject. An exhaustive study will be made of selected chapters in the history of the development of educational thought. Sources will be investigated whenever available. Lectures, readings, and exhaustive reports. Assistant Professor BOLTON.

Fall and winter terms; two hours a week.

19. GRADUATE SEMINAR IN PEDAGOGICS—Designed to assist graduate students in original research and in the prosecution of thesis work for advanced degrees. Assistant Professor BOLTON.

Throughout the year; two hours a week.

ANIMAL MORPHOLOGY AND PHYSIOLOGY

PROFESSOR HOUSER; MR. LAMBERT, MR. STROMSTEN,
MR. _____.

Admission to graduate work in this department requires familiarity with the fundamental principles of animal biology, and training in methods of microscopical study. For a major course, the requisite preparation should involve at least two

*The starred courses will not all be given in one year. A group will be offered each year, thus enabling the student to secure from this list new courses for at least three years. This arrangement, combined with the opportunities provided by the twelve regular courses given each year, and the special seminar work, offers a wide scope of work to those seeking the master's or doctor's degree in pedagogy.

years of laboratory work; while not less than one year should precede a minor course.

All graduate courses offered by this department presuppose a knowledge of elementary physics and chemistry, and the ability to read German and French. Additional requirements for entrance to any course are stated in the description of the course.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

3. **COMPARATIVE ANATOMY OF VERTEBRATES**—The dissection of a series of representative protochordate and vertebrate forms, accompanied by lectures, conferences, and reading from Wiedersheim's *Comparative Anatomy of Vertebrates*. This course, while also a preparative for the study of human anatomy, is intended primarily for those expecting to pursue advanced courses in animal morphology. Mr. LAMBERT and an assistant.

Throughout the year; Tu., Fri., 1:30 to 4:30.

4. **VERTEBRATE HISTOLOGY**—This is a laboratory course on the microscopical anatomy of the tissues and organs of vertebrates, with constant use of the reference library. The work includes the principles and more general methods of investigation, particularly fixing, imbedding, sectioning, staining, and mounting. The training in technique provided by this course is a necessary preparation for all higher courses offered by the department. Professor HOUSER and Mr. STROMSTEN.

Fall term. Lectures: Thu., 1:30. Laboratory work: Mon., Wed., 1:30 to 4:30.

5. **EMBRYOLOGY OF VERTEBRATES**—Lectures on the comparative embryology of vertebrates, supplemented by required reading. Demonstrations and practical studies of germ-cells, oogenesis, spermatogenesis, fertilization of the ovum, cleavage of the fertilized egg, and formation of the germ-layers of the embryo. Later on, the laboratory work consists of the preparation and study of the chick at successive stages of development during the first four days of incubation. Prerequisite, courses 3 and 4. Professor HOUSER and Mr. STROMSTEN.

Winter and spring terms. Lectures: Thu., 1:30. Laboratory work: Mon., Wed., 1:30 to 4:30.

6. **COMPARATIVE NEUROLOGY**—A course on the structure and physiology of the nervous system and its terminal organs.

The study has a wide scope, touching invertebrate nervous mechanisms in a general way, but going into greater detail in the vertebrate series. The subject is presented by lectures, references to literature, anatomical work, and microscopical study through the use of the neurological methods of Golgi, Weigert, Nissl, Ehrlich, and others. Prerequisite, courses 3, 4, and 5. Professor HOUSER and Mr. STROMSTEN.

Throughout the year. Lectures and laboratory work: Tu., Fri., 1:30 to 4:30.

C. COURSES OPEN TO GRADUATES ONLY

7. **CYTOLOGY**—This is a course for the special study of the animal cell, and for the consideration of the prominent theories founded upon cellular biology. Lectures, conferences, and reports. The laboratory work involves the application of refined methods of research, and embraces studies on the characters of protoplasm, and on the general structure and functions of the animal cell as exhibited by the Protozoa, and a widely selected series of cells from higher animals. Texts: Hertwig's *Die Zelle und die Gewebe*, Wilson's *The Cell in Development and Inheritance*, supplemented by references to special monographs. Prerequisite, courses 4, 5, and 6. Professor HOUSER.

Throughout the year; Mon., Wed., 9:00 to 12:00. To alternate with course 8; given in 1901-1902.

8. **EXPERIMENTAL MORPHOLOGY**—The animal organism is here studied with particular reference to the relations between it and the forces of its environment. The method of instruction embraces work in the field on the local faunas, laboratory study of the effects upon the organism of chemical and physical agents, with lectures, conferences, and reports. Texts: Verworn's *Allgemeine Physiologie*, Davenport's *Experimental Morphology*, supplemented by references to original literature. Prerequisite, courses 4, 5, and 6. Professor HOUSER.

Throughout the year; Mon., Wed., 9:00 to 12:00. To alternate with course 7; omitted in 1901-1902.

9. **MORPHOLOGICAL SEMINARY**—Weekly meetings of the instructors and advanced students of the department for the presentation of papers, the review of literature, and informal discussions. The primary object is to acquaint those devoting especial attention to animal morphology with some of the aims and problems of current investigation. Professor HOUSER.

Throughout the year; Thu., 4:30 to 5:30.

10. **RESEARCH COURSE**--Original investigation of a special problem in animal morphology, with the preparation of a dissertation. The subjects assigned for research will be in Neurology, Cytology, Experimental Morphology, Embryology, and Histology. For graduate students having the requisite preliminary training in biological work. Professor HOUSER.

Throughout the year; five periods each week.

HISTOLOGY AND EMBRYOLOGY

DR. WHITEIS.

As a prerequisite to advanced work in this department the student will be required to possess a good working knowledge of both the methods and the subject matter of general histology and embryology. Two courses are offered, as follows:

1. **THE EYE**--The histology of its tissues, considered in relation to both their phylogenetic and their ontogenetic development. The structure and development of the retina will be specially studied. Time to be arranged.

2. **THE EAR**--The investigation will proceed along the same lines as in the preceding course.

Time to be arranged.

In either course the student will be assigned a private laboratory and offered such opportunities as the general laboratory and the library afford. The department will supply the necessary tissues and reagents.

ZOOLOGY

PROFESSOR NUTTING; ASSISTANT PROFESSOR WICKHAM.

Two years' work in natural science, one of which shall have been in zoology or animal morphology, will be required as a preliminary to admission to graduate courses with zoology as major.

One year's work in zoology, animal morphology, or botany will be required for admission to graduate courses with zoology as a minor.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

4. **INSECT ANATOMY AND DEVELOPMENT**--Lectures and laboratory work. Assistant Professor WICKHAM.

Fall term; three hours a week.

5. **SYSTEMATIC ENTOMOLOGY**—An application of the facts of insect anatomy and development to the science of classification. Assistant Professor WICKHAM.

Winter term; three hours a week.

6. **ENTOMOLOGY**—A study of insects with special reference to the philosophical bearings of the subject. Assistant Professor WICKHAM.

Spring term; three hours a week.

7. **LECTURES ON SPECULATIVE ZOOLOGY**—This course is devoted to a presentation of the more prominent theories concerning the origin and development of animal forms and a historical review of the position held by the most prominent workers in speculative zoology. Special attention will also be paid to a study of the habits, instincts, and intelligence of animals. Professor NUTTING.

Throughout the year; two hours a week.

8. **THESIS**—Equivalent to two terms' work. Advanced work in any group of animals of which the Museum contains a sufficiently large series. Free access to any specimens or books on the Museum floor is accorded to students doing thesis work in zoology. Professor NUTTING.

C. COURSES OPEN TO GRADUATES ONLY

9. An exhaustive systematic discussion of any limited group of animals of which the Museum affords sufficient material and the library sufficient literature.

In several groups, such as birds, echinoderms, mollusca, crustacea, coleoptera, and cœlenterata, the Museum can now offer facilities for the most advanced systematic work, both the material and the literature being adequate.

10. Special investigation along the lines of speculative zoology; e. g., coloration of animals, geographical distribution, variation, natural selection, etc.

Each course in zoology will involve considerable original research, and cannot be outlined in advance, as it is impossible to foretell the direction in which the student will be led by his investigations. As an example of the nature of the work expected of students taking zoology as a major, the following outline of a thesis presented and accepted for the master's degree is given:

Subject: *Individual Variation of Animals in a State of Nature.*

Material used: The unusually large series of certain American birds in the Museum of Natural History, and the literature on variation in the University library.

Method of work: Over ten thousand measurements were taken of the parts to be compared. These measurements were recorded and used in constructing diagrams which show graphically (a) the actual extent of variation; (b) the comparative extent of variation; (c) correlation in variation of different parts of the animal.

The thesis itself presents a discussion of variation in general and the results of the special investigations of the writer in particular, with immediate reference to their bearing on the theory of natural selection as advanced by Charles Darwin. The diagrams indicated that not only the extent of variation, but also the direction in which it is tending, can be ascertained by the method used by the writer.

BOTANY

PROFESSOR MACBRIDE; ASSISTANT PROFESSOR SHIMEK.

General courses in elementary botany, including the courses in plant histology and physiology are required as preliminary to graduate work in this department. Graduates selecting botany as a minor may receive credit for courses (B) which follow. Those making botany the major subject may take courses (C), or their equivalent in work to be specially arranged.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

4. **PHYSIOLOGY OF THE PLANT CELL**—Two general topics are presented in this course: (a) the general physiology of the cell so far as this can be made a subject of microscopic investigation, the study of chlorophyll, photosynthesis, starch, the proteids, and the several by-products of vegetable metabolism; (b) the physiology of cell-division, the microscopic structure of cytoplasm, the nucleus, nuclear division especially as illustrated in the formation of spores, pollen, etc. Professor MACBRIDE and Assistant Professor SHIMEK.

Spring term; ten hours per week.

5. **GENERAL PLANT PHYSIOLOGY AND ECOLOGY**—In this course the most important problems of ecology in the broadest sense are discussed, and illustrated by field and laboratory work. The local flora, developed under the diversified condi-

tions existing in the region about the University, furnishes abundant material for the illustration of the more important phases of modern ecology.

This course is especially recommended to those intending to teach. Assistant Professor SHIMEK.

Two hours per week during the year.

6. GENERAL MYCOLOGY—This is a course in the fungi and consists of laboratory work, supplemented by lectures, experiment, and collateral reading. It is an advanced course. Students make and classify collections for themselves. In identifying material collected, students are aided by extensive mycologic literature, *exsiccati*, etc. Professor MACBRIDE.

Fall term; daily as arranged.

7. VEGETABLE EMBRYOLOGY—A special laboratory course with collateral reading. This course is confined chiefly to the consideration of the embryology of phenogamous plants. Some plant is selected by the student and its whole life history traced. Professor MACBRIDE.

Throughout the year; daily as arranged.

8. SPECIAL SYSTEMATIC WORK—The large collections of the University now afford unusual opportunity for the special study of particular groups and families, and students are invited to engage in original research in the revision of accumulated species. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year.

9. SPECIAL APPLIED BOTANY—A course for students of pharmacy and medicine. The official *Materia Medica* is made the basis of the special study of medicinal plants, their nature, origin, and relationships. Professor MACBRIDE.

Winter and spring terms.

10. THESIS COURSE—Designed for such students, either graduate or others, as desire to undertake problems of original research. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year.

11. SEMINARY—A special course in reading and study of current literature is arranged for such students as have completed at least three courses in botany. Students are expected to prepare written reviews and criticisms of the literature presented, to engage in discussion of topics specially assigned, and to carry forward at appropriate seasons special investigations

in the field as directed. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year; one hour a week, Monday evening.

C. COURSES OPEN TO GRADUATES ONLY

12. HISTOLOGY—The preparation and critical study of material illustrative of the structure of some special group of either sporophytes or spermatophytes, or the critical study of some special sporophytes or spermatophytes, or the critical study of some special organ or tissue as developed in different plant groups. Professor MACBRIDE and Assistant Professor SHIMEK.

13. PHYSIOLOGY—Practical experimentation in laboratory and field, with the object of solving, so far as may be practicable, some physiological problem as presented in the case of a selected plant or group of plants; or the critical study of the function of some special organ, or group of tissues. Other topics may be found in research relative to the effect of environment, cross and self-fertilization, etc., in the matter of the distribution and differentiation of species, laws of heredity, and kindred problems. Professor MACBRIDE and Assistant Professor SHIMEK.

14. SYSTEMATIC BOTANY—Comparative study of the species of plants found in special geographic distribution; studies of special, natural orders of plants, cryptogamic or phenogamic, with reference to their taxonomy, relationships, distribution, etc.; comparative study of plants of economic importance, their relationships and history; studies in problems of local forestry, especially as related to conditions found in the Mississippi valley. Professor MACBRIDE and Assistant Professor SHIMEK.

PATHOLOGY AND BACTERIOLOGY

DR. BIERRING.

Candidates for advanced academic degrees may pursue research work in pathology and bacteriology in the laboratories of the College of Medicine. The number of students who can participate in the work, however, is limited by the accommodations of the special laboratory arranged for such work.

The following relations with respect to major and minor subjects are to be observed: When the major subject chosen

is bacteriology the minors should include either chemistry, or botany, or both; while, if the major be either experimental or comparative pathology, the minors should comprise such subjects as morphology, physiology, and psychology. Work in this department may also be elected as a minor.

Special courses may be arranged to suit the requirements of individual students.

Throughout the year; hours to be arranged.

GEOLOGY

PROFESSOR CALVIN; MR. GEORGE.

Undergraduate work in Geology, equivalent to at least five hours a week for one year, is required as preliminary to entering upon graduate work in this department. The geological field within reach of Iowa City and the geological collections and reference library belonging to the University afford ample opportunities for research work in geology. Courses can be arranged to meet the wishes of individual students. Following are outlines of some of the courses which may be chosen from the possible range of subjects available for graduate work :

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

5. **ECONOMIC GEOLOGY**—The course is intended to give a practical knowledge of the geological products of the United States which are of economic importance. It will include :

(a). Metalliferous products; the nature and distribution of ore deposits; the sources and modes of deposition of ores, with special reference to the ores of iron, copper, lead, zinc, nickel, tin, manganese, silver, and gold.

(b). Non-metalliferous products, including coal, petroleum, natural gas, phosphates, gypsum, marls, cements, building stone, etc.; soils, fertilizers, and water supply. MR. GEORGE.

Second and third terms; daily at 10:00.

6. **PETROLOGY**—The course will include :

(a). Crystallography; a study of the properties of crystals, the process of crystallization and the crystal systems, with laboratory exercises, using natural crystals, crystal models, and microscopic sections of crystals.

(b). Descriptive and determinative mineralogy of the rock-making minerals.

(c). The mineralogical and chemical composition of rocks, their origin, structural features, and classification.

The laboratory equipment for this course consists of carefully selected collections representing all the principal rock-making minerals, rock families, and rock types, together with several hundred thin sections for study with the microscope, and a number of the latest and best petrographical microscopes. Mr. GEORGE.

Through the year; daily, lectures and laboratory work, 1:30 to 3:30.

7. **INVERTEBRATE PALEONTOLOGY**—The course in Paleontology is designed primarily to give the student such acquaintance with fossil faunas as will enable him to determine the age of rocks containing recognizable organic remains. The principles of classification are studied, and the principal fossil types are carefully described from museum material or from specimens collected in the field. Professor CALVIN.

The course may be taken so as to count two, three, or five hours.

Through the year, at 8:00.

8. **GEOLOGY OF IOWA**—This course is offered to students who have had the equivalent of courses 3 and 4, or 3 and 5, and is intended for those who, for any reason, desire an intimate knowledge of the geology of the state. To count five hours for one, two, or three terms. Hours arranged to meet the convenience of students. Professor CALVIN.

PETROLOGY—Advanced work is offered to students who have taken a course in petrology. The work will consist in the careful study of the rocks of a selected region, and the preparation of a thesis on the same. Hours arranged to suit the convenience of students. The course may be taken so as to count two, three, or five hours through the year. Mr. GEORGE.

C. COURSES OPEN TO GRADUATES ONLY

10. **RESEARCH WORK IN PALEONTOLOGY**—This course may be taken as a major or a minor by candidates for graduate degrees. It may embrace such problems as the stratigraphic distribution of the fauna of a given geological formation, the critical study of certain selected geological faunas, the geographical and geological range of certain zoological groups of organisms, or the evidences of descent in successive geologi-

cal faunas. Length of course from one to three years. Professor CALVIN.

11. **FIELD WORK IN GEOLOGY**—This work may cover any one of a large range of subjects. For example, it may include the careful study of the indurated rocks of some selected area, making sections, correlating outcrops, mapping the geology, and writing a report. The study of Pleistocene geology in Iowa affords many interesting problems relative to the age and composition of the drift in different localities, the characteristics and origin of the crystalline boulders, the origin and distribution of the loess, and a host of other questions. The work may be directed by Professor CALVIN or Mr. GEORGE.

12. **RESEARCH WORK IN ECONOMIC GEOLOGY OR MINERALOGY**—The work in this course will depend largely on the previous preparation of the student. It may consist of detailed study of some geological field of economic importance, or of some mineral or group of minerals and the related industries. The credit given will depend on the nature of the work and the time spent. Mr. GEORGE.

CHEMISTRY

PROFESSOR ANDREWS; DR. C. L. VON ENDE, MR. BRINK.

These courses lead to the degrees of Master of Science and Doctor of Philosophy, respectively.

Graduates of accepted colleges who have done the amount of work in chemistry ordinarily covered in four terms, comprising general elementary chemistry with laboratory work, introductory qualitative analysis, and introductory quantitative analysis, may become candidates for the former of these degrees.

The requirements for admission to the courses leading to the doctor's degree demand three years' preparatory work in chemistry and comprise a good knowledge of the following branches: general chemistry, qualitative analysis, quantitative analysis, organic chemistry (including some experience in organic combustions and organic preparations), and outlines of chemical technology. A thorough course in physics is very desirable as a preparation for either of the advanced courses; and if, in any case, deficiencies exist in this respect they must

be made up after entering, and a corresponding increase in the duration of the course is to be expected.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

5. **CHEMICAL ANALYSIS**, comprising advanced studies in both qualitative and quantitative work; instruction being given, by lectures and laboratory work, in mineral analysis, detection and separation of the commoner and rarer constituents of ores and minerals and of commercial products of all kinds. Special work may be taken, when desired, in gas analysis, water analysis, and in optical methods of analysis.

6. **PHYSICAL CHEMISTRY**, comprising electro-chemical theory, thermo-chemistry, and in general the study of chemical processes as distinguished from the study of chemical substances. Instruction in this branch is given by lectures and in the seminar as well as in the laboratory, the equipment of which is such as to enable this important branch to be taken up with profit and with the aid of modern apparatus and methods.

7. **ORGANIC CHEMISTRY**, comprising lectures on the theory, and laboratory work, both in organic preparations and in organic analysis.

9. **ORGANIC PREPARATIONS**—Laboratory work comprising preparation of typical organic compounds, methods of synthesis, and study of reactions. This course must be preceded or accompanied by course 7.

10. **DETERMINATIVE MINERALOGY AND CRYSTALLOGRAPHY**—Laboratory practicum. This course can be taken as a minor only.

C. COURSES OPEN TO GRADUATES ONLY

11. **RESEARCH WORK** in either of the branches designated above under 5, 6, or 7. In all cases where chemistry is taken as a major, part of the work must be in class c.

Much weight is attached to properly directed courses of reading. The attention of the student is turned particularly to the study of the *sources*—of the original publications of investigators who have built up the science of chemistry, rather than to the works of compilers or text-book makers; since it is believed that in this way the scientific spirit can best be stimulated and developed.

The graduate student is encouraged to work independently as far as his acquirements and powers permit, and to make all his work, in a certain sense, research work.

PHYSIOLOGICAL CHEMISTRY

PROFESSOR ROCKWOOD.

Suitable courses in physiological chemistry will be outlined to meet the requirements of graduate students desiring to pursue some phase of this subject, either as a major or as minor in a course leading to an advanced degree. The applicant for such a course must satisfy the head of the department as to his knowledge of general chemistry, and as to his fitness for undertaking original investigations. The resources of the chemical laboratory of the College of Medicine will be made available to the student, and the work will be under the direct supervision of the professor in charge.

Time to be arranged.

PHYSICS

PROFESSOR VELEN; MR. LORENZ.

Those wishing to enter upon a minor course in physics should previously have pursued a course equivalent to the undergraduate course in general physics covering one year, and should also have a good working knowledge of algebra, geometry, trigonometry, and, if possible, of plane analytical geometry. For those taking physics as a major course, a knowledge of differential and integral calculus is necessary, and, in some cases, differential equations will be needed.

A description of the physical laboratory and workshop will be found under the head of Material Equipment.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

4, 5. PHYSICAL MEASUREMENTS—A general course in measurements, giving the student facility in the use of instruments of precision in all branches of practical physics, including the study of the principles of their construction and action, and training in the methods of recording and reducing the results of observations. Professor VELEN and Mr. LORENZ.

Two terms; five hours a week.

6. INVESTIGATION OF SIMPLE PROBLEMS, or research of such nature as the training gained from courses 4, 5, may enable the student to prosecute. Professor VEBLEN and Mr. LORENZ.

One or more terms; five hours a week.

DIRECT CURRENT MACHINERY—The simple theory of the direct current dynamo and motor. Professor VEBLEN and Mr. LORENZ.

One term; five hours a week.

9. (i) THEORY OF ALTERNATE CURRENTS—A mathematical and graphical treatment of the more common problems of alternate current circuits.

(ii) ALTERNATE CURRENT MACHINERY—The theory and action of alternate current generators, motors and transformers, including polyphase transmission. Professor VEBLEN and Mr. LORENZ.

Time to be arranged.

13. HEAT AND THERMODYNAMICS—Theoretical and practical discussion, including solutions of many typical problems. Lectures and laboratory work. Professor VEBLEN and Mr. LORENZ.

Spring term; two or three hours a week.

15. PHYSICAL SEMINAR—Systematic and critical reading of journals. Reports upon important papers and articles Professor VEBLEN.

Throughout the year; time to be arranged.

C. COURSES OPEN TO GRADUATES ONLY

16. SPECIAL RESEARCH—Open to students who have a sufficient preliminary knowledge of general physics, and who have the necessary experimental skill, acquired in a course similar to 4, 5 above. In choosing this course the student must satisfy the instructors that he is sufficiently equipped to undertake research work; and the choice will of course be limited to such problems as the material facilities of the laboratory will make possible of solution.

17. THEORETICAL AND PRACTICAL STUDY OF SOME PARTICULAR GROUP OF PHENOMENA OR LAWS—Such a course may consist of critical study of the literature of the subject chosen, as the electro-magnetic theory of light, polyphase currents, terrestrial magnetism, etc. In all cases experimental work will be required where it will be useful or applicable.

18. **THESIS**—In all cases where physics is pursued as a major subject for an advanced degree a thesis will be required. In courses 16 and 17 above the thesis will form a very important part of the requirement. It should embody the record and results of the research or the argument and conclusions of the study. While theses will be criticised primarily with respect to their subject matter, it is expected that they will present a neat appearance and be commendable pieces of literary work.

MATHEMATICS

PROFESSOR WELD; ASSISTANT PROFESSOR SMITH, DR. WESTFALL, MR. ———, MR. BECK.

It is to be noted that for each of the following courses in mathematics a knowledge of the elements of the differential and integral calculus is a prerequisite. The graduate student in other lines of work may, however, upon recommendation of the professor in charge of his major subject, take as a minor the elementary course in analytical geometry and calculus offered to undergraduates. (See course 3, Announcement of College of Liberal Arts for 1901-1902). The courses here outlined may, many of them, be taken by undergraduates specializing in mathematics, though they cannot, in general, be taken *in absentia*.

All graduate students in mathematics are expected to take an active part in the mathematical seminar, and every candidate for an advanced degree will be required to submit a thesis, prepared under the direction of his instructors, representing original investigation in either pure or applied mathematics.

B. COURSES OPEN TO GRADUATES AND UNDERGRADUATES

4. (*a, b*) **ADVANCED CALCULUS**—A continuation of the work of the sophomore year, devoted particularly to such topics as the extension of Taylor's theorem, the theorems of Lagrange and Leibnitz, maxima and minima of functions of two or more variables, transformations of differential equations, variations, etc. DR. WESTFALL.

Fall and winter terms; Mon., Wed., Fri., at 9:00.

(*c*) **DIFFERENTIAL EQUATIONS**—An elementary course devoted to the methods of solution of ordinary differential

equations. Open to all students who have completed the elements of differential and integral calculus. Dr. WESTFALL.

Spring term; Mon., Wed., Fri., at 9:00.

5. (a, b) THEORY OF FUNCTIONS—Lectures, the work of Durege being used by the student for collateral reading. Professor WELD.

Fall and winter terms; Mon., Wed., at 11:00.

(c) DEFINITE INTEGRALS, including a discussion of the Beta and Gamma functions. Lectures. Professor WELD.

Spring term; Mon., Wed., at 11:00.

9. DETERMINANTS AND MODERN GEOMETRY—Determinants, the theory of quantics, the principle of invariance; modern analytic geometry of two and of three dimensions. Professor WELD.

Throughout the year; Tu., Th., at 8:00.

10. ANALYTICAL MECHANICS—*Statics*: Composition and resolution of forces, the funicular polygon, centers of gravity, moment of inertia, friction, etc. *Kinetics*: Rectilinear motion, projectiles, constrained motion of a particle, the pendulum, etc.

A course for engineering students, supplemented by a three hours' course in applied mechanics. (See the courses in civil engineering in the Announcement of the College of Liberal Arts for 1901-1902). Assistant Professor SMITH.

Throughout the year; Tu., Th., at 11:00.

11. THEORETICAL MECHANICS—Problems in statics and dynamics; virtual velocities; the principle of least action; the dynamics of a particle, with special reference to the theory of orbital motion; the potential theory, with special reference to attractions. Assistant Professor SMITH.

Throughout the year; Mon., Wed., Fri., at 11:00.

This course will not be given in 1901-1902.

13. (a) THE METHOD OF LEAST SQUARES, with numerous applications to the reduction of series of physical observations. Assistant Professor SMITH.

Fall term only; Mon., Wed., Fri., at 2:30.

14. (b) THE THEORY OF SURFACES, with problems. Dr. WESTFALL.

Winter term only; Mon., Wed., Fri., at 2:30.

15. (c) QUATERNIONS—Lectures and collateral reading. Professor WELD.

Spring term only; Mon., Wed., Fri., at 2:30.

16. **THE MATHEMATICAL SEMINAR** is conducted for the benefit of students making a special study of mathematics, and is open to all who have completed elementary calculus. The topics upon which papers are prepared under the direction of the several instructors are such as are suggested by the regular work of the various courses.

Throughout the year; Tu. or Th., 2:00 to 4:30.

C. COURSES OPEN TO GRADUATES ONLY

6. **ELLIPTIC INTEGRALS AND FUNCTIONS**—Lectures and problems. This course may be taken in connection with course 5. Professor WELD.

Throughout the year; Fri., at 11:00.

7. **HARMONIC FUNCTIONS**—Lectures and problems with collateral reading.

(a) Laplace's equations of continuity in rectangular, cylindrical, and spherical coordinates; Fourier's series and integral.

(b) Applications of Fourier's series to problems in acoustics, heat, electricity, etc.

(c) Cylindrical, zonal, and spherical harmonics, with numerous applications to physical problems. Professor WELD.

Throughout the year; Tu., Th., at 11:00.

This course will not be given in 1901-1902.

DIFFERENTIAL EQUATIONS—Lectures. The subject is to be treated from the standpoint of Sophus Lie's theory of continuous groups. Dr. WESTFALL.

Throughout the year; Tu., Th., at 9:00.

12. (a, b) **HYDROMECHANICS**—Laws of pressure; equilibrium and oscillation of floating bodies; conditions of equilibrium of a mass of rotating fluid; application to the figure of the earth. Equations of motion of a perfect fluid; the motion of solids in a fluid medium; waves. Assistant Professor SMITH.

Fall and winter terms; Mon., Wed., Fri., at 11:00.

(c) **THEORY OF SOUND**—Equations of motion; vibrations of strings and membranes; flexure of bars. Equations of motion of a perfect gas. Assistant Professor SMITH.

Spring term; Mon., Wed., Fri., at 11:00.

Graduate courses in *Astronomy* cannot be offered at present. For elementary courses, see the current Announcement of the College of Liberal Arts.

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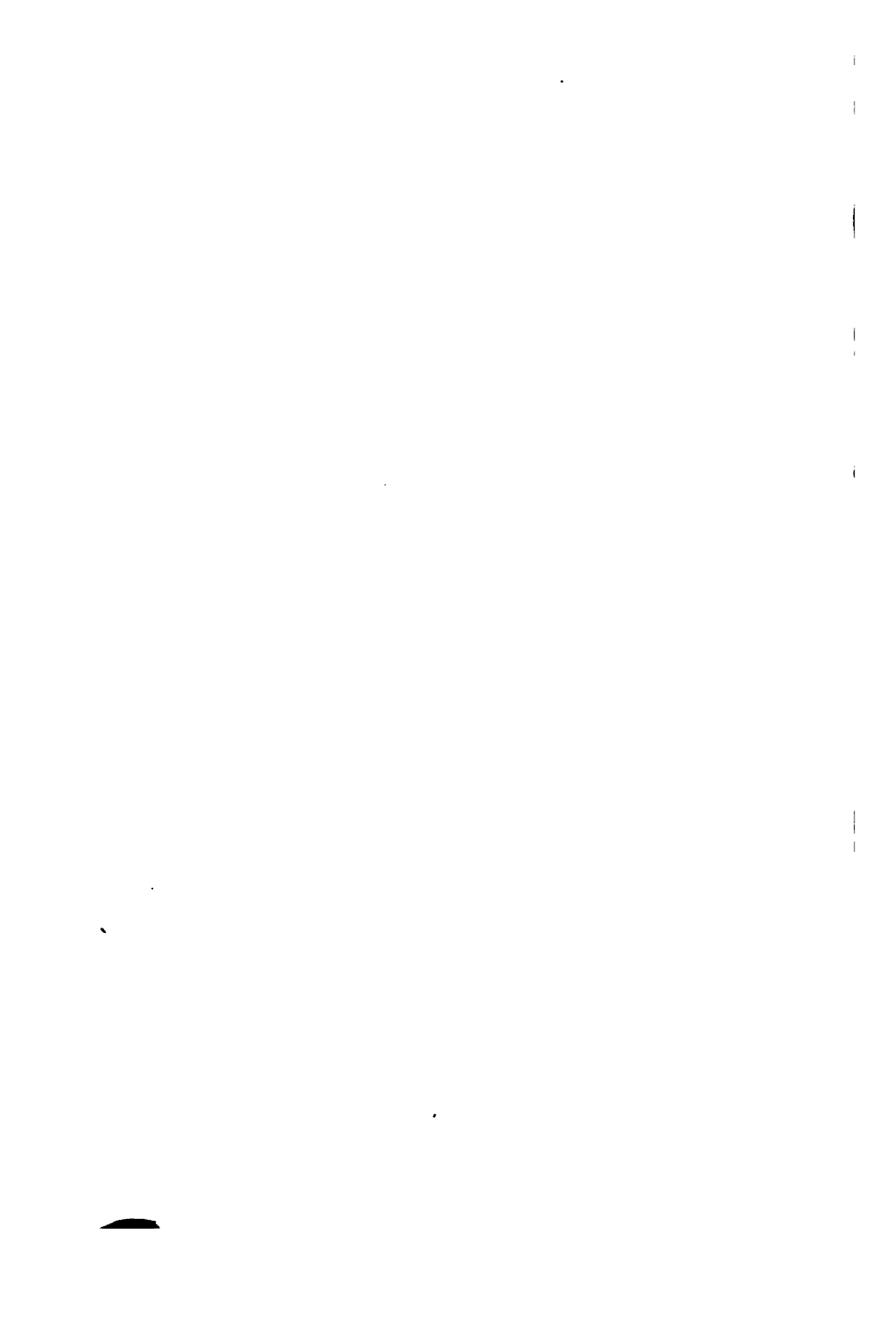


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College of Law



COLLEGE OF LAW

THE FACULTY

GEORGE E. MACLEAN, PH. D., LL. D.,
President and Acting Dean.

Dean.

SAMUEL HAYES, M. S., LL. B.,
Resident Professor of Law.

HARRY SANGER RICHARDS, B. PH., LL. B.,
Resident Professor of Law and Secretary of the Faculty

ELMER ALMY WILCOX, B. A.,
Resident Professor of Law.

Resident Professor of Law.

EMLIN MCCLAIN, M. A., LL. D.,
Lecturer on Law.

MARTIN J. WADE, LL. B.,
Lecturer on Law.

HORACE EMERSON DEEMER, LL. B.,
Lecturer on Law.

H. CLAUDE HORACK, B. PH., LL. B.,
Librarian.

*To be appointed.

EXAMINING COMMITTEE, 1899-1900.

J. C. BEEM, What Cheer.	MRS. M. LLOYD KENNEDY,
H. L. HASTINGS, Battle Creek.	Sioux City.
J. A. HENDERSON, Jefferson.	S. I. KING, Logan.
GEO. B. HOLBERT, Iowa City.	JULIUS LISCHER, Davenport.
A. HOLLINGSWORTH, Keokuk.	F. W. LOHR, Sioux City.
JOHN HUNT, Iowa City.	E. C. NICHOLS, West Liberty.
W. E. JOHNSON, Ida Grove.	C. A. ROBBINS, Winterset.
W. S. KENYON, Ft. Dodge.	J. H. ROTHROCK, Cedar Rapids.
	T. S. STEVENS, Hamburg.

COLLEGE OF LAW

LENGTH OF COURSE

The College of Law was organized as a department of the University in 1868, the course of study covering one year. In 1884 the General Assembly passed an act requiring two years study for all candidates for admission to the bar, and the course of study in this department was extended to the same period. By act of the Twenty-eighth General Assembly (see Acts of the Twenty-eighth General Assembly, Chapter 11) the period of study for admission to the bar was extended to three years, and a preliminary education substantially equivalent to a three years high school course was required. With the view of conforming the course of study in the College of Law to this legislation and qualifying the graduates of the College for admission to the bar, the Board of Regents at its meeting in March, 1900, authorized the extension of the course from two to three years. The extension has been made and the class of 1901 is the last class to graduate in the two years' course.

INSTRUCTIONAL STAFF

At present the instruction is in the hands of three resident professors who devote their entire time to the school, and three lecturers who give extended courses. By the beginning of the University year, 1901-1902, it is expected that the present vacancy in the office of Dean will be filled and that an additional resident professor will be elected.

ADMISSION

Applicants for admission to the first year class who are graduates of universities or colleges, or matriculates of universities or colleges, or graduates of academies or high schools whose courses of study are approved by the faculty, may be admitted to the College without examination upon presentation of diplomas and certificates showing such graduation or matriculation. All other applicants must pass a preliminary examination on subjects usually taught in a high school course of three years. All applicants who seek admission by diplomas from academies or high schools or by examination, must pass the University examination in English.

ADVANCED STANDING**SECOND YEAR**

Applicants for admission to second year standing must comply with the conditions hereinbefore set out for candidates for the first year class, and in addition thereto must pass successful examinations in four of the five principal subjects of the first year, or their equivalents, namely, Elementary Law, Contracts, Torts, Evidence, and Criminal Law and Procedure; they must also furnish certificates showing one year's study of law either in some reputable law school or in a law office under the direction of an attorney in active practice. Applicants who have already been admitted to the bar in states where an examination is required, may enter upon presentation of certificates showing admission to practice.

THIRD YEAR

Applicants for admission to third year standing must comply with all the conditions hereinbefore set out for candidates for admission to the first year class, and in addition thereto pass satisfactory examinations in four of the five principal subjects of the first year course or their equivalents set out under the provisions governing second year standing; also in four of the principal subjects of the second year course, viz.: Insurance, Bills and Notes, Bailments and Carriers, Agency, Sales and Chattel Mortgages, and Wills and Probate Law, or the equivalents of these subjects; they must also present certificates showing two years study of law, one of which must have been in a reputable law school and the other either in a reputable law school or under the direction of an attorney in active practice.

SPECIAL STUDENTS

Applicants for admission to the College of Law, not candidates for a degree, but desiring to pursue special subjects, will be admitted on complying with the admission requirements governing candidates for degrees, or on showing by a special examination that they are qualified to pursue the subjects desired.

Students will be admitted to the College at any time, but they will find it to their advantage to enter at the beginning of a term and best to enter at the beginning of the University year.

Entrance examinations and examinations for advanced standing will be held on Tuesday, September 17, 1901, at 9:00 a. m., in the Old Capitol building.

COURSE OF STUDY

The course of study is so arranged that the several classes have separate and distinct courses of study throughout. The elementary courses are grouped in the first year, and the specialized courses in the second and third years, the design being to cover the fundamental subjects of the law and to equip the student for the active practice of the profession.

FIRST YEAR

FALL TERM

Elementary Law	8½ w. Contracts	14 w.
Code Pleading	5½ w.	

WINTER TERM

Procedure	7 w. Torts	12 w.
Domestic Relations	5 w.	

SPRING TERM

Evidence	10 w. Criminal Law and Procedure	10 w.
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SECOND YEAR

FALL TERM

Insurance	5½ w. International Law	5½ w.
Bills and Notes	8½ w. Bailments and Carriers	8½ w.

WINTER TERM

Sales and Chattel Mortgages	12 w. Agency, including Master and Servant	7 w.
	Guaranty and Suretyship	2 w.
	Trial Procedure	3 w.

SPRING TERM

Probate Law	5 w. Advanced Pleading	5 w.
Wills	5 w. Justice Practice	2 w.
	Attachments, Garnishment, and Execution	3 w.

THIRD YEAR

FALL TERM

Partnership	11 w.	Real Property	14 w.
Drafting of Instruments	3 w.		

WINTER TERM

Equity and Equity Pleading	12 w.	Private Corporations	6 w.
		Constitutional Law	6 w.

SPRING TERM

Trusts	5 w.	Constitutional Limitations	6 w.
Damages	5 w.	Municipal Corporations	4 w.

GENERAL LECTURES

Federal Jurisprudence.
 Legal Ethics.
 Medical Jurisprudence.

MOOT COURTS

For the purpose of affording the student practice in the application of legal principles to statements of fact, moot courts are conducted for a portion of each year in the first and second year classes, and each student is required to conduct or defend causes in these courts. The courts are presided over by members of the faculty. The method and rules of procedure follow those of the trial courts, and the student is given an opportunity to test pleadings and try causes under these rules. This feature of instruction is an important one in the College. Students are encouraged to form club courts, and the faculty will aid such clubs in every possible way.

COMBINED LIBERAL ARTS AND LAW COURSE

Students of the College of Liberal Arts who have completed their junior year and are entitled to senior standing at the beginning of the University year may become enrolled in the College of Law and receive credit for one year's time of law study by complying with the following conditions: They must schedule for five hours per week in the College of Law in the subjects of the first year course and five hours a week in subjects in the College of Liberal Arts elected from courses selected by a joint committee of the College of Liberal Arts and the College of Law from the group of subjects embracing History, Sociology, Economics, Political Science, and Philoso-

phy; the remaining five hours may be elected in any course the student desires, subject to the regulations of the College of Liberal Arts. Students in this combined course who earn credit for Elements of Jurisprudence, International Law, and Constitutional Law in the College of Liberal Arts are excused from examinations in Elementary Law, International Law, and Constitutional Law, except Constitutional Limitations, as given in the College of Law, and the grades made by students in such subjects in the College of Liberal Arts will be accepted as credits in the College of Law. Students of this course must, however, with the exception of the absolute equivalents above enumerated, pass examinations in all the subjects of the law course prior to graduation. For the guidance of students in the combined course who do not elect all of the absolute equivalents it may be stated that Elements of Jurisprudence is an equivalent for Elementary Law, International Law for the same course in the College of Law, and Constitutional Law for the same course in the College of Law excepting that part dealing with Constitutional Limitations.

The right to enter the joint course rests within the discretion of the joint committee of the College of Law and the College of Liberal Arts.

INSTRUCTION IN THE COLLEGE OF LIBERAL ARTS

Law students who desire to take work in the College of Liberal Arts in addition to their regular work in the College of Law without being candidates for a degree in the College of Liberal Arts shall be allowed to take such work to an extent not exceeding five hours per week as long as they maintain a good standing in their law studies and as long as the work which they elect in the College of Liberal Arts is done to the satisfaction of the professors in charge. This privilege is also subject to the discretion of the standing joint committee of the College of Law and the College of Liberal Arts. No additional charge is made for this instruction. Students in the College of Liberal Arts during their senior year may elect five hours per week in the work of the first year in the College of Law as a substitute for a corresponding amount of work in the College of Liberal Arts, receiving credit therefor for graduation.

PUBLIC SPEAKING

Writing of forensics and briefs. The handling of evidence. The value of persuasion in securing conviction. The develop-

ment of voice and body for public speaking. Two terms; hours to be arranged. Professor GORDON.

EQUIPMENT

The College of Law has the exclusive occupancy of the second floor of the central building on the campus. On the completion of the new Liberal Arts building now in process of construction, the accommodations of the College in the way of lecture rooms and library space will be materially increased.

LIBRARY

The library contains about nine thousand volumes, comprising a full series of the reports of the Supreme Court of the United States and of the courts of last resort of thirty-six states, including all the series of reports most frequently referred to; also the American Decisions, American Reports, American State Reports, Lawyers' Reports Annotated, English Ruling Cases, a collection of English Reports which (with additions lately made) is almost complete; full series of the Reporter System, and a large collection of law text-books. Students are allowed personal access to the book stacks.

The library is in charge of a regular librarian who renders valuable assistance to the students in the prosecution of their work.

The library rooms are open for the use of students from 8 a. m. to 12 m. and from 1:30 to 5:30 p. m. and 7 to 9 p. m. of each school day, and during the forenoon of Saturday.

HAMMOND HISTORICAL LAW COLLECTION

A valuable collection of twelve hundred volumes relating principally to the Civil Law and History of the Common Law, presented to the University by the widow of William G. Hammond, LL. D., the first Chancellor of the College of Law, is kept in the law library as a separate collection for the use of the students of the College of Law and others interested in such subjects. These books are in special cases, under the charge of the law librarian, and are accessible on request.

UNIVERSITY LIBRARY

The University library, containing over 55,000 volumes, is also open to students of this College, and books may be drawn from it under reasonable regulations.

THESES

Each candidate for graduation must present to the faculty, on or before the first Monday in April, a thesis upon some legal topic approved by the faculty. Such thesis must be legibly written or printed by typewriter, on paper 8x10½ inches in size of page, leaving a blank margin of at least one inch at side and at top and bottom. The thesis shall not be less than 1,500 words nor more than 2,500 in length, exclusive of citations of authorities. In citing cases the names of the parties as well as the volume and page of the report must be given. Each thesis must have on the first page thereof the subject of the thesis and the name of the writer, with the year.

The character of the thesis will be taken into account in determining whether the candidate is qualified to be recommended to the examining committee for final examination. All theses become the property of the College.

The subjects approved by the Faculty for the year 1900-1901 are as follows:

1. Discuss the right of the court, in criminal cases, to dismiss the jury, without the consent of the defendant, after jeopardy has begun and before a verdict has been reached.
2. Discuss the meaning of the words "compound offenses" in Section 5284 of the Code.
3. Discuss the rights of a holder of a negotiable instrument who has taken it as security for, or in conditional payment of, a pre-existing debt.
4. Discuss the liability of the bank which receives out-of-town paper from depositor for the wrongful failure of its correspondent to collect.
5. Discuss the distinction between a corporation and a co-partnership.
6. Discuss the liability of a municipal corporation for the torts of its officers, agents and servants.
7. Discuss *Lawrence v. Fox* (20 N. Y. 268) and the limitations of the doctrine announced therein.
8. Discuss *Frost v. Knight* (L. R. 7 Exchr. 111). How affected by the principle that the plaintiff must not increase defendant's damages after a breach?
9. Annotate and discuss *Lumley v. Wagner* (1 D. G. M. & G. 604).
10. Will a court of equity enjoin acts which disturb the privacy of an individual?

11. Will the fact that an act, otherwise lawful, is done maliciously give rise to an action?

12. Discuss the effect of anti-monopoly or anti-trust legislation on the right of a party to sell the good will of a business.

13. Discuss whether the same promise or performance can serve as a consideration for successive promises, whether made to the same or to different parties.

14. Discuss the liability of a partner to account for profits made in other business, when information was obtained through connection with the firm.

15. Annotate and discuss *Donellan v. Reid* (23 Eng. C. L. R. 391).

16. Discuss the general question of the validity of a chattel mortgage of fixtures.

17. Discuss the validity of a chattel mortgage on future property, especially with reference to the validity of such mortgage on property not even potentially owned by the mortgagor at the time of the mortgage.

18. Discuss the validity of a contract by a common carrier of goods, limiting his liability to a fixed value.

19. Discuss the question as to divisibility of a policy of insurance for specific sums on distinct items of property.

LITERARY SOCIETIES

Two literary societies, The Hammond Law Senate and The Forum, composed exclusively of students of this College, hold regular weekly meetings, furnishing to their members valuable training in debating and other exercises usually provided for by such organizations.

TUITION—FEES

The rate of tuition established by the Board of Regents is \$20 per term of about twelve weeks, payable to the Treasurer of the University. It is required by recent action of the Board of Regents that tuitions shall be paid by new students at the time of their matriculation, and by old students at the time of registering at the opening of the term. Tuition must be paid before the student is entitled to any of the privileges of the College. Each student, upon passing his final examination, is required to pay the sum of \$7 as a graduation fee to cover the charge for diploma and for certificates of admission to the State and Federal Courts. There are no other fees or charges.

GRADUATION

Three years' study is essential to graduation, one year of which must have been spent in this College. Before being recommended for graduation the candidate must satisfy the faculty of his proficiency in all the prescribed studies of the course by passing examinations therein. If the candidate has pursued a portion of his studies in some other law school, he must pass satisfactory examinations in a sufficient number of the subjects for which credit is asked to satisfy the faculty of his proficiency before being given the credits set out in his certificate. Candidates must be of good moral character. Upon being recommended by the faculty, candidates must pass a final examination conducted at Iowa City by a commission of examiners appointed by the Supreme Court of Iowa in accordance with the statutes and rules of the Supreme Court regulating admission to the bar (see Acts Twenty-eighth General Assembly, Chapter 11). Upon passing such examination, candidates receive the degree of Bachelor of Laws and are entitled to practice in all the courts in the state of Iowa, oaths of admission being administered in connection with their graduation, and they receive the usual diplomas and certificates of admission. Candidates are also admitted to practice in the Federal Courts on graduation, the oath being administered at that time. Those who are not twenty-one years of age may pass the examination and receive their diplomas, but cannot be admitted to practice until attaining that age. Special students or those leaving the school in good standing prior to graduation are entitled to certificates showing actual time of attendance at this College and the grades attained in the examinations passed.

COST OF BOOKS

The following list comprises the books required for use in recitations. This list is not exhaustive, as the recent changes and extension of the course have necessitated some additions which have not been determined upon:

Bishop on *Contracts*; Wambaugh's *Cases for Analysis*; McClain's *Synopses*; *Annotated Code of Iowa*; Burdick's *Cases on Sales*; Cooley on *Torts*; Jones on *Evidence*; McClain's *Outlines of Criminal Law and Procedure*; Fisher's *Criminal Cases*; Norton on *Bills and Notes*; Tiedeman on *Real Property*; McClain's *Cases on Carriers*; Jones on *Chattel Mortgages*; Bisham's *Principles of Equity*; Elliott on *Private Corporations*;

McClain's *Cases on Constitutional Law*; Perry on *Pleading*; Burdick's *Cases on Partnership*; Beale's *Cases on Damages*; and the *Law Bulletin*.

In addition to the above, it is recommended that the student provide himself with a good law dictionary and as many as practicable of the following text-books, which are recommended: Walker's *American Law*, or Pomeroy's *Municipal Law*; Schouler's *Domestic Relations*; Pomeroy's *Remedies and Remedial Rights*, or Bliss on *Code Pleading*; Drake on *Attachment*; Benjamin, or Tiedeman, on *Sales*; Schouler on *Bailments and Carriers*; Story, or Mechem, on *Agency*; Bates on *Partnership*; May on *Insurance*; Beach, or Morawetz, on *Corporations*; Curtis on *Jurisdiction of Federal Courts*; Cooley's *Principles of Constitutional Law*, or Cooley's *Constitutional Limitations*.

Any of the books mentioned may be procured through the law librarian from time to time, as needed, at a considerable reduction from list price; they are not kept for sale by the book stores in Iowa City.

The College of Law owns about twelve sets of the text-books above mentioned as required in the course, which it will rent in sets to students, furnishing them all the books required for any year for \$10 for the year. The rent sets do not include a law dictionary nor the *Law Bulletin*. As there are sometimes more calls for rent sets than can be met, those who desire to rent books should make application in advance.

EXPENSES—SELF-SUPPORT

There are no dormitories or commons connected with the University. Boarding and lodging in private houses can be obtained for from \$3 to \$5 per week. Clubs are formed in which the cost of living is from \$1.50 to \$2.50 per week.

While it is impossible for the University authorities to guarantee that any student will be able to earn his way through college, yet Iowa City with its eight thousand inhabitants furnishes many opportunities for employment. The Y. M. C. A. has established a free labor bureau which is at the service of students. The association makes a canvass of the city to find work and suitable lodging and boarding places.

For further information apply to Geo. E. MacLean, President of the University, or to H. S. Richards, Secretary of the Law Faculty, Iowa City.



College of Medicine

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COLLEGE OF MEDICINE

FACULTY AND INSTRUCTORS

- GEORGE EDWIN MCLEAN, PH. D., LL. D.,**
President of the University.
- PHILO JUDSON FARNSWORTH, M. A., M. D.,**
Emeritus Professor of Materia Medica, and Therapeutics.
- JOHN CLINTON SHRADE, M. A., M. D., LL. D.,**
Emeritus Professor of Obstetrics, Gynecology, Clinical Gynecology,
and Diseases of Children.
- WILLIAM DRUMMOND MIDDLETON, M. A., M. D.,**
Professor of Surgery and Clinical Surgery, and Dean of the Faculty.
- LAWRENCE WILLIAM LITTIG, M. A., M. D., M. R. C. S.,**
Professor of Theory and Practice of Medicine, and Clinical Medi-
cine, and Assistant to the Chair of Surgery.
- JAMES RENWICK GUTHRIE, M. A., M. D.,**
Professor of Obstetrics and Gynecology.
- ELBERT WILLIAM ROCKWOOD, B. S., M. D.,**
Professor of Chemistry and Toxicology, and Secretary of the
Faculty.
- JAMES WILLIAM DALBEY, B. S., M. D.,**
Professor of Ophthalmology.
- CHARLES SUMNER CHASE, M. A., M. D.,**
Professor of Materia Medica and Therapeutics.
- WALTER LAWRENCE BIERRING, M. D.,**
Professor of Pathology and Bacteriology, and Clinical Assistant to
the Chair of Obstetrics and Gynecology.
- JOHN WALTER HARRIMAN, M. D.,**
Professor of Anatomy, and Assistant to the Surgical Clinic.
- CHARLES MOORE ROBERTSON, M. A., M. D.,**
Professor of Otology, Rhinology, and Laryngology.
- WILLIAM ROBERT WHITEIS, M. S., M. D.,**
Professor of Histology and Embryology, and Clinical Assistant to
the Chair of Otology, Rhinology, and Laryngology.
- LEE WALLACE DEAN, M. S., M. D.,**
Professor of Physiology and Assistant to the Chair of Ophthal-
mology.
- MARTIN J. WADE, LL. B.,**
Professor of Medical Jurisprudence.

GERSHOM HYDE HILL, M. A., M. D.,
Lecturer on Insanity.

FRANK THOMAS BREENE, D. D. S., M. D.,
Lecturer on Dentistry.

JAMES FREDERICK CLARKE, M. A., M. D.,
Lecturer on Hygiene.

JOHN BLAIR KESSLER, M. D.,
Lecturer on Dermatology.

ELI GRIMES, M. D.,
Lecturer on Electro-Therapeutics.

GEORGE EDWARD DECKER, M. D.,
Lecturer on Pediatrics.

JENNINGS PRICE CRAWFORD, M. D.,
Lecturer on Surgical Technique.

EMIL LOUIS BOERNER, Pharm. D.,
Instructor in Pharmacy.

WILBER JOHN TEETERS, M. S., Ph. C.,
Instructor in Pharmacy.

ALBERTUS JOSEPH BURGE, M. S., M. D.,
Instructor in Physical Diagnosis, and Assistant to the Department
of Theory and Practice of Medicine.

WILLIAM EDWARD BARLOW, M. A.,
Demonstrator of Chemistry.

JOHN THOMAS MCCLINTOCK, B. A., M. D.,
Demonstrator of Anatomy, Pathology, and Bacteriology.

HENRY MAX GOETTSCH, M. S.,
Demonstrator of Chemistry.

THEODORE WILBERT KEMMERER, B. S., M. D.,
Demonstrator of Pathology and Bacteriology.

FRED W. BAILEY,
Assistant Instructor in Physiology.

OSCAR PERCY JOHNSTONE, B. A.,
Fellow in Chemistry.

CHARLES LEONARD SMITH, B. A.,
Fellow in Histology.

CLARA BEATRICE WHITMORE, B. A.,
Tutor in Medical Latin.

ZADA M. COOPER, Ph. G.,
Assistant in the Pharmacy Laboratory.

DENNIS FRANCIS FITZPATRICK, M. D.,
Assistant Demonstrator of Anatomy.

LYELL REPERT,
Undergraduate Assistant in Histology.

BERT VIRGIL SCARBOROUGH,
Undergraduate Demonstrator of Anatomy.

JOHN LEALAND TAYLOR,
Undergraduate Demonstrator of Anatomy.

COLLEGE OF MEDICINE

A thorough elementary preparation is required before entering on the course of medical lectures. The University offers a preliminary scientific course preparatory to the professional, and it is expected that many will avail themselves of this opportunity. In the branches of medicine there should be a thorough training in principles before the practical portion is begun. For this purpose a careful presentation of the subjects is made by lectures, and the knowledge fixed by recitations and frequent reviews. Ample means of illustration are used, and the materials for demonstration are abundant. In the practical branches abundant clinical material is found to illustrate the subjects taught.

Medical, surgical, gynecological, ophthalmological, dermatological, otological, and rhino-laryngological clinics are held each week during the term. Attendance upon these is required of all students, excepting those engaged in laboratory work during clinic hours.

The thirty-second annual course of lectures will begin on September 19, 1901, and will close on June 12, 1902.

The course extends through four years of thirty-six weeks each. The session is divided into two semesters of eighteen weeks, and the semester into two terms of nine weeks each.

OUTLINE OF THE PLAN OF INSTRUCTION

DEPARTMENT OF ANATOMY

PROFESSOR HARRIMAN; DR. MCCLINTOCK, DR. FITZPATRICK, MR. SCARBOROUGH, MR. TAYLOR

Anatomy is taught by means of lectures, conferences, recitations, and demonstrations, and by practical work in the laboratories.

Lectures are illustrated by charts, models, blackboard figures, wet and dry specimens, and recent dissections of the human body. A complete assortment of disarticulated human bones is loaned to each student at the beginning of the year. The laboratory of practical anatomy occupies the basement of the Medical Building. Recent legislative enactment provides ample material for dissection.

1. **OSTEOLOGY**—A course in the anatomy of the human skeleton by means of lectures, recitations, and demonstrations. Four hours each week during first semester, freshman year. Professor HARRIMAN.

2. **ARTHROLOGY, MYOLOGY, AND ANGIOLOGY**—A course in the anatomy of joints, muscles, arteries, veins, and lymphatics, by lectures, recitations, and demonstrations upon the dissected human body. Four hours each week during first term of second semester, freshman year. Professor HARRIMAN.

3. **SPLANCHNOLOGY**—A course in the anatomy of the viscera and allied structures, by means of lectures, recitations, and demonstrations upon dissected bodies and wet specimens. Four hours each week during second term of second semester, freshman year. Professor HARRIMAN.

4. **PRACTICAL ANATOMY**—A course in the dissection of the human body. Ten hours each week during first term of second semester, freshman year, 3:30 to 5:30 p. m. daily, except Saturday. Dr. MCCLINTOCK, Dr. FITZPATRICK, Mr. SCARBOROUGH, Mr. TAYLOR.

5. **OSTEOLOGY, ARTHROLOGY, MYOLOGY, AND ANGIOLOGY**—A course consisting wholly of recitations upon subjects taken up during the freshman year. Four hours each week during first term of first semester, sophomore year. Professor HARRIMAN.

6. **PRACTICAL ANATOMY**—A course in the dissection of the human body. Ten hours each week during first term of first semester, sophomore year, 3:30 to 5:30 p. m. daily, except Saturday. Dr. McCLINTOCK, Dr. FITZPATRICK, Mr. SCARBOROUGH, Mr. TAYLOR.

7. **SPLANCHNOLOGY**—A lecture, demonstration, and recitation course in the anatomy of the viscera of the trunk and genito-urinary organs. Four hours each week during second term of first semester, sophomore year. Professor HARRIMAN.

8. **NEUROLOGY AND ORGANS OF SPECIAL SENSE**—A didactic, recitation, and conference course in the anatomy of the cerebro-spinal nervous system and organs pertaining to the special senses. Four hours each week during first term of second semester, sophomore year. Professor HARRIMAN.

9. **APPLIED ANATOMY**—A didactic, recitation, and demonstration course on the anatomy of important regions, with special reference to its application in medical and surgical diagnosis. Three hours each week during second term of second semester, sophomore year. Professor HARRIMAN.

10. **SURGICAL ANATOMY**—A lecture and recitation course on anatomy as applied to surgery. One hour each week during second semester, junior year. (Elective). Professor HARRIMAN.

DEPARTMENT OF PHYSIOLOGY

PROFESSOR DEAN; MR. BAILEY.

The department of Physiology occupies a suite of rooms which includes a laboratory of experimental physiology and a room for animals. The latter is so arranged that frogs, turtles, rabbits, etc., can be kept throughout the whole year under suitable conditions. The room is supplied with separate compartments so that animals which are being experimented upon can be kept by themselves and observed.

The physiological laboratory is equipped with a full supply of apparatus, instruments, and chemicals for experimental purposes. The outfit includes artificial respiratory machines, myographs, chronographs, various kinds of electrical batteries, galvanometers, ergographs, kymographs, stethometers, sphygmographs, hemometers, hemoglobinometers, and cardiographs.

In addition the laboratory is well equipped with various artificial eyes, retinoscopes, ophthalmoscopes, models of the eye and ear, and instruments for determining the acuity of vision and hearing.

The course in Physiology is graded in the first and second years.

In the first year the students hear the lectures and attend recitations. The lectures are abundantly illustrated by charts, experiments upon the living animal and upon the human subject. These lectures cover, as far as possible, the subject of biology and the proximate analysis of the human body, the fundamental laws governing life, a study of the fundamental physiological processes in the body, and a study of the nutritive media, the lymph, chyle, and blood, the elementary functions of the nervous system, and the physiology of reproduction, secretion, excretion, circulation, respiration, and of the muscles and nerves.

In the second year the work is made as practical as possible and includes lectures upon the digestive and nutritive processes in the body, the processes of assimilation, the physiology of the nervous system, of the eye, the ear, nose, throat, and larynx. In addition to the lectures and recitations the student does practical experimental work in the laboratory. For this the class is divided into sections, and each section works under the immediate supervision of the professor or instructor in Physiology. The physiological laboratory is open from nine o'clock in the morning until six o'clock in the evening, and, as the instructor is always present, the student can work as much time outside of his regular hours as he cares to. The student is made familiar with the various apparatus and physiological instruments and their uses and is also taught the methods of experimentation. He is supplied with living animals and upon these studies the physiological activity of the various parts and the organs under normal and abnormal conditions, being required to keep an accurate record of his experiments. Each student is required to complete at least fifty different physiological experiments.

In the third year a practical course on the physiology of the special senses and physiological optics is given.

The laboratory is at all times open to students taking this course.

In this course the student studies models of the eye and ear, and performs a number of experiments with the Kuhne artificial eye, observing how it can be converted into a myopic, hyperopic, emmetropic, or an astigmatic eye, and how the

circumstances. He studies the muscle model of the eye, and observes the action of the various muscles upon the eye-ball and the interference with this motion as a result of the paralysis of one or a group of these muscles.

Models of the ear are furnished and the student observes the methods by which sound is transferred from the external world to the inner ear, and the action of the various pathological changes in the inner ear upon the transmission of sound waves.

Each student is supplied with a perimeter, an ophthalmoscope, and a retinoscope. Each student makes practical determination of the fields of vision in the human subject and learns to use the ophthalmoscope and the retinoscope upon artificial eyes, upon the rabbit's eye, and upon the human eye.

This course is designed to fit the student for work in practical ophthalmology and refraction.

1. **ELEMENTARY PHYSIOLOGY**—Lectures, recitations, and demonstrations dealing with the physiology of the animal and plant cell, the fundamental properties of protoplasm, and the proximate principles of the animal body. Three hours a week, first term, first semester, freshman year. Professor DEAN.

2. **SYSTEMIC PHYSIOLOGY**—Lectures, recitations, and demonstrations. This course includes the physiology of reproduction, circulation, respiration, and the lymphatic system. Three hours a week, second term, first semester, freshman year. Professor DEAN.

3. **PHYSIOLOGY OF SECRETION**—Lectures, recitations, and demonstrations dealing with the physiology of secretion. Both the external and the internal secretions are studied. The changes in the secretory cells and the nervous mechanism governing the secretions are investigated. The course includes a discussion of the physiology of the kidney, skin, ductless glands, and other glands in the body. Three hours a week, first term, second semester, freshman year. Professor DEAN.

4. **PHYSIOLOGY OF MUSCLE AND NERVE**—Lectures, recitations, and demonstrations. This course includes a study of the activity of muscle and nerve under normal and abnormal conditions and the electrical disturbances in muscle and nerve. Three hours a week, second term, second semester, freshman year. Professor DEAN.

5. **PHYSIOLOGY OF DIGESTION**—Lectures, recitations, and demonstrations. This course includes a study of the various digestive juices and their activities and the nervous mechanism governing the digestive organs. Three hours a week, first term, first semester, sophomore year. Professor DEAN.

6. **GENERAL PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM**—Lectures, recitations, and demonstrations. This course includes the physiology of the spinal cord, sympathetic system, and the peripheral nerves. Three hours a week, second term, first semester, sophomore year. Professor DEAN.

7. **PHYSIOLOGY OF THE BRAIN AND CRANIAL NERVES**—Lectures, recitations and demonstrations. Three hours a week, first term, second semester, sophomore year. Professor DEAN.

8. **PHYSIOLOGY OF THE EYE AND EAR**—Lectures, recitations and demonstrations. Three hours a week, third term of the sophomore year. Professor DEAN.

9. **EXPERIMENTAL PHYSIOLOGY**—Laboratory work and demonstrations. This course includes a study of physiological apparatus and its uses. Experiments to demonstrate the functions of the muscular, nervous, respiratory, circulatory, and digestive systems, and on the eye and ear are performed by the students on frogs, turtles, rabbits, pigeons, dogs, etc.

The class is divided into sections. Fifty-four hours during the sophomore year for each section. Professor DEAN, Mr. BAILEY.

10. **PHYSIOLOGICAL OPTICS**—Lectures, recitations, and laboratory work. This course includes a study of the refractive media of the normal eye, of the ophthalmoscope, the retinoscope, the ophthalmometer, the perimeter, and their uses.

The class in sections will use in the laboratory the above mentioned instruments until thoroughly familiar with them. Lectures one hour a week, second term, first semester, and first term, second semester, junior year. Laboratory work fifteen hours. Professor DEAN, Mr. BAILEY.

11. **ADVANCED PRACTICAL PHYSIOLOGY**—Elective. This course is open to students who have completed Courses 1 to 10, inclusive. The student may select any subject in Physiology and do advanced work. He will be supplied with animals and apparatus for this work. Nine hours a week during senior year. Professor DEAN, Mr. BAILEY.

DEPARTMENT OF CHEMISTRY AND TOXICOLOGY

PROFESSOR ROCKWOOD; MR. BARLOW, MR. GOETTSCH,
MR. JOHNSTONE.

The lectures in Chemistry are delivered in the Medical Building. The work in Practical Chemistry is conducted in the Chemical Building of the University in which the College of Medicine occupies rooms on the ground floor. These consist of rooms for the instructors, storerooms, and two large laboratories. They are well lighted, and are heated by steam. Ventilating shafts remove offensive and injurious gases. The outfit is ample for demonstrating the general principles of Chemistry, as well as its application to medicine. Each student is supplied free of charge with a set of the necessary apparatus, being obliged to pay only for that which is injured or destroyed.

The course in Chemistry is designed, first, to give the student a thorough knowledge in fundamental principles, then to assist him in applying these to the problems which he will meet in the practice of his profession. The lectures are fully illustrated by experiments.

1. CHEMISTRY OF THE NON-METALLIC ELEMENTS—Lectures and recitations. Freshman year, first semester. Three hours each week. Professor ROCKWOOD.

2. CHEMISTRY OF THE METALS AND THEIR COMPOUNDS—Lectures and recitations. Freshman year, second semester, first term. Three hours each week. Professor ROCKWOOD.

3. ORGANIC CHEMISTRY—Lectures and recitations. Freshman year, second semester, second term. Three hours each week. Professor ROCKWOOD.

4. PRACTICAL CHEMISTRY—A laboratory course. It consists, first of Analytical Chemistry, including the methods of testing for the metallic poisons; then the common medicinal compounds are studied. The student learns the methods of chemical manipulation and the use of apparatus, and also becomes acquainted with the action of reagents and of the common chemicals upon each other. The course includes the chemical examination of water from a sanitary standpoint, each student making a number of analyses of various wholesome and polluted waters. Freshman year, first semester, and first term of second semester. Six hours each week. Professor ROCKWOOD, Mr. BARLOW, Mr. GOETTSCH, Mr. JOHNSTONE.

5. **VOLUMETRIC ANALYSIS**—A laboratory course. Volumetric methods of quantitative analysis are especially adapted to the needs of the physician because of the rapidity and ease with which they can be executed. The principal ones are taught and the student is given enough practice to familiarize him with them. Freshman year, second semester, second term. Six hours each week. Professor ROCKWOOD, Mr. BARLOW, Mr. GOETTSCH, Mr. JOHNSTONE.

5. **PHYSIOLOGICAL CHEMISTRY**—Lectures and recitations. The lectures are in explanation and amplification of the laboratory work. This includes the study of the proximate principles of the body and their chemical changes, also foods and digestion, blood, milk, urine, fermentation and bacterial products. Sophomore year, first semester, and first term of second semester, two hours each week, and second semester, one hour each week. Professor ROCKWOOD.

7. **GENERAL PHYSIOLOGICAL CHEMISTRY**—A laboratory course. The proximate principles of the body and food materials are prepared by the student and their properties and chemical changes are studied. Experiments in artificial digestion are made, their products being isolated and examined. The constituents of the blood are tested chemically and spectroscopically. Sophomore year, first semester. Two hours each week. Professor ROCKWOOD, Mr. BARLOW, Mr. GOETTSCH.

8. **APPLIED PHYSIOLOGICAL CHEMISTRY**—A laboratory course. The modern methods of Physiological Chemistry are here used in solving problems which arise in the practice of medicine. These include such as the analysis of the gastric juice, quantitative tests being made where they are valuable for diagnostic purposes; the qualitative tests for the abnormal constituents of the urine, with the quantitative determination of such as are of importance; the identification of urinary sediments, of calculi, and of blood stains. Each student makes a complete examination of a large number of each of these, handing in written reports for correction and suggestions. Sophomore year, second semester. Two hours each week. Professor ROCKWOOD, Mr. BARLOW, Mr. GOETTSCH.

9. **TOXICOLOGY**—Lectures and recitations. The physiological and chemical action of the principal poisons is considered as well as their antidotes. The methods of identifying poisons in food, excreta, etc., are explained and illustrated by

experiments. Junior year, first semester, and first term of second semester. One hour each week. Professor ROCKWOOD.

10. **ADVANCED WORK**—Suitable courses will be outlined to meet the requirements of the individual graduate student desiring to carry on advanced work either as a major or as a minor in a course leading to an advanced degree in the Graduate College of the University. The applicant for such a course must satisfy the head of the department as to his knowledge of general Chemistry and as to his fitness for undertaking original investigations. The work will be under the direct supervision of the professor in charge of the department. Throughout the year. Time to be arranged. Professor ROCKWOOD.

DEPARTMENT OF HISTOLOGY AND EMBRYOLOGY

PROFESSOR WHITEIS; MR. REPERT, MR. SMITH.

The Histological Laboratory occupies rooms in the College of Liberal Arts. There are laboratories for class work and for special work. The department is furnished with fifty-five compound microscopes and a number of dissecting microscopes. Among the other equipment may be mentioned several microtomes for brain sections, celloidin work, and paraffin work; incubators and injection apparatus; also the reagents and appliances usually found in a well-furnished histological and embryological laboratory.

1. **THE HISTOLOGY OF CELLS AND TISSUES**—The first work of the course is on the structure and manipulation of the microscope. It is followed by a consideration of the classification and action of stains. Cell structure, as seen in the simpler forms of plant and animal cells, is first studied, then the more highly differentiated animal cells. After this the histology of the animal tissues is taken up. Freshman year, first semester, first term.

Three lectures and one recitation each week. Professor WHITEIS.

Laboratory work, six hours each week. Professor WHITEIS, Mr. REPERT, Mr. SMITH.

2. **THE HISTOLOGY OF THE DIGESTIVE TRACT, GENITO-URINARY TRACT, AND RESPIRATORY TRACT**—Freshman year, first semester, second term.

Three lectures and one recitation each week. Professor WHITEIS.

Laboratory work, six hours each week. Professor WHITEIS, Mr. REPERT, Mr. SMITH.

3. THE HISTOLOGY OF THE SKIN AND NERVOUS SYSTEM—Freshman year, second semester, first term.

Three lectures and one recitation each week. Professor WHITEIS.

Laboratory work, six hours each week. Professor WHITEIS, Mr. REPERT, Mr. SMITH.

4. EMBRYOLOGY AND BIOLOGY.—The embryos of the chick, frog and some mammal will be studied, in addition to the lower forms of animal life. Freshman year, second semester, second term.

One lecture and one recitation each week. Professor WHITEIS.

Laboratory work, two hours each week. Professor WHITEIS, Mr. REPERT, Mr. SMITH.

5. LABORATORY TECHNIQUE—An optional course. Freshman year, second semester, second term. Two hours each week. Professor WHITEIS, Mr. REPERT, Mr. SMITH.

6. ADVANCED WORK FOR A DEGREE IN THE GRADUATE COLLEGE—As a prerequisite to advanced work in this department the student will be required to possess a good working knowledge of both the methods and the subject matter of general histology and embryology. He will be assigned a private laboratory and offered such opportunities as the general laboratory and library afford. The department will supply the necessary materials in the way of tissues and reagents.

Throughout the year, hours to be arranged. Professor WHITEIS.

Two courses are offered, as follows :

I. THE EYE—The histology of its tissues, considered in relation to both their phylogenetic and their ontogenetic development. The structure and development of the retina will be specially studied.

II. THE EAR—The investigation will proceed along the same lines as in the preceding course.

9. ELECTRO-THERAPEUTICS AND MASSAGE—The construction and manipulation of the various forms of apparatus are first considered and the practical workings of batteries and their accessories are demonstrated. The fundamental laws of

DEPARTMENT OF MATERIA MEDICA AND THERAPEUTICS

PROFESSOR CHASE; DR. BOERNER, MR. TEETERS, DR. GRIMES, MISS WHITMORE, MISS COOPER.

1. **INORGANIC MATERIA MEDICA**—The course is introduced by definitions, routes, and modes of administering drugs, dosage, classification of official preparations, and a discussion of prescription-writing, including the subject of incompatibilities. Following such general topics inorganic drugs will be taken up in a natural order of grouping. Sophomore year, first semester. Two lectures and one recitation each week. Professor CHASE.

2. **ORGANIC MATERIA MEDICA**—Drugs both of vegetable and of animal origin will be considered. As before they will be grouped, some dominant or characteristic action determining the position. Thus are grouped together drugs affecting the nervous system, the heart and circulatory system, the respiration, etc. Prescription-writing will be given careful attention throughout the session, it being the aim to illustrate each drug with one or more practical prescriptions and to discuss briefly its mode of administration. Toward the close of the year a general review is given. Sophomore year, second semester. Two lectures and one recitation each week. Professor CHASE.

3. **THERAPEUTICS**—General Therapeutics is presented at the outset by means of such subjects as pneumotherapy, hydrotherapy, balneotherapy, climato-therapy, psychotherapy, hypnotism, suggestion, heat and cold, light and darkness, and other general therapeutic measures more or less mechanical. Junior year, first semester, first term. Two lectures and one recitation each week. Professor CHASE.

4. **THERAPEUTICS**—Following the preceding course drugs of a general nature or such as affect the tissues of the body generally, or such organized systems as reach them, are presented separately: for example, those used to stimulate or depress the heart, to modify nutrition, or those which act upon the nervous system. Junior year, first semester, second term. Two lectures and one recitation each week. Professor CHASE.

5. **THERAPEUTICS**—The preceding course is followed by a discussion of local remedies; that is, remedies acting upon

mucous membranes stimulating their functional activity. Junior year second semester. Two lectures and one recitation each week. Professor CHASE.

6. THEORY AND PRACTICE OF PHARMACY—A lecture course. The history of the pharmacopœia will be discussed, also metrology, with special attention to the metric system. The processes used in pharmacy which are of especial interest to the medical student will be considered, such as solution, clarification, percolation, the determination of specific gravity, the preparation of emulsions, suppositories, cachets, tablet-triturates, etc., also standards of strength and official tests. Freshman year, second semester. One hour each week. Mr. TEETERS.

7. PHARMACEUTICAL PREPARATIONS—A laboratory course. The satisfactory production of twenty-five preparations, embracing the various classes of the U. S. Pharmacopœia, National Formulary, etc., is required. Sophomore year, first semester, first term. Forty-eight hours. Dr. BOERNER, Mr. TEETERS, Miss COOPER.

8. MEDICAL LATIN—Those who have had but little opportunity to study Latin previous to entering upon their medical work will be afforded an opportunity in this course where they will receive special drill with the view to acquiring such a knowledge as must be in the possession of the accurate prescription-writer. It includes the work outlined in Crothers and Bice's *Elements of Latin*, and, in connection with this, work on prescription writing. In the first semester the grammar is studied, including the two independent sets of exercises upon each chapter. These are especially designed to present those principles of Latin etymology and construction which are essential to an intelligent use of the terminology of pharmacy and medicine. In the second semester the study of the grammar is continued, special attention being given to pharmacopœial nouns and anatomical terms. The prescription is taken up, its definition, analysis, formulæ, form, grammatical construction, language, and synthesis being studied. A review of the entire work completes the course. Throughout the year. Two hours each week. Miss WHITMORE.

9. ELECTRO-THERAPEUTICS AND MASSAGE—The construction and manipulation of the various forms of apparatus are first considered and the practical workings of batteries and their accessories are demonstrated. The fundamental laws of

electricity are given briefly, emphasizing those of use to the student and practitioner. The consideration of the currents in common use follows with their differences and measurements. This includes galvanic, induced, alternating, and interrupted currents, also the choice of currents for different purposes, as the cautery, electrolysis, cataphoresis, etc. The physiological effect of the current, its therapeutical uses, and the electric current in diagnosis are considered. The use of the static machine and X-ray apparatus is given by actual work and demonstration. The course also includes the principles of massage. Junior and senior years, second semester. Twelve hours. Dr. GRIMES.

10. PRACTICAL THERAPEUTICS—An elective course. This will consist of a review by way of theses prepared by the students upon stated cases involving original research and reference to the latest and most approved medical periodicals. Such theses will be read and discussed before the members of the senior class. One hour each week, first semester and first term of second semester.

General review of entire subject. 'Second term of second semester. One hour each week. Professor CHASE.

DEPARTMENT OF PATHOLOGY AND BACTERIOLOGY

Professor BIERRING; Dr. McCLINTOCK; Dr. KEMMERER.

The course in Pathology and Bacteriology extends through the sophomore, junior, and senior years, and is presented by means of didactic lectures, recitations, demonstrations, and laboratory work. The lectures are devoted to Bacteriology and general and special Pathology, and are illustrated by means of drawings, preparations from the Medical Museum, and fresh specimens derived from post-mortem examinations and the University clinics.

The laboratory of Pathology and Bacteriology is situated in the west hall on the second floor of the Medical Building. It is thoroughly equipped with new microscopes of the most modern type, and all apparatus necessary for carrying on every form of bacteriological research. Each student is provided with a table, a microscope, and the necessary staining reagents.

1. GENERAL PATHOLOGY AND PATHOLOGICAL HISTOLOGY—A didactic recitation and laboratory course, including

the general features of infection, and the causation of disease processes, disorders in circulation and nutrition, inflammation, and allied subjects. The laboratory work consists of two hours each week from January to June, and is illustrative of the didactic lectures, comprising the preparation and study of slides showing the general pathologic change that occurs in human tissues. Special attention is given to the drawing of the microscopic specimens; to test the knowledge of the student reviews of unknown specimens are given at different times during the course. Sophomore year, four hours each week. Professor **BIERRING**, Dr. **KEMMERER**.

2. **BACTERIOLOGY**—A didactic, recitation, and laboratory course for juniors from September to January, which includes the preparation of artificial culture media, the cultivation of micro-organisms, and their separation by means of plate cultures, the staining, recognition, and diagnosis of the different pathogenic microbes, as they are related to the various infectious processes.

Special attention is given to the bacteriologic analysis of water, and the practical application of bacteriologic technique to hygiene and clinical diagnosis. The didactic lectures will include such subjects as cannot properly be pursued in connection with the laboratory work. A recitation will be held each week during the course. Junior year, seven hours each week, from September to January. Professor **BIERRING**, Dr. **MCCLINTOCK**, Dr. **KEMMERER**.

3. **SURGICAL PATHOLOGY**—A laboratory course for juniors comprising principally the preparation and study of tumors.

The extensive material from the University clinics is drawn upon, which, with the large collection in possession of the laboratory, affords the opportunity of studying every possible variety of tumor formation.

Special attention is given to the drawing of microscopic sections. This and the occasional reviews of unknown specimens test the student's ability properly to make a microscopic diagnosis. Junior year, two hours each week during the second term of the first semester. Professor **BIERRING**, Dr. **KEMMERER**.

4. **SPECIAL PATHOLOGY**—A didactic demonstration, recitation, and laboratory course, including the special pathology of the different tissues and organs of the human body.

The laboratory work will comprise the preparation and study of microscopic sections, illustrating as far as possible the subjects considered in the didactic lectures. Frequent demonstrations of gross pathologic preparations derived from the clinics, autopsies, and the Medical Museum will further elucidate the subject. Junior year, five hours each week, from January to June. Professor BIERRING, Dr. KEMMERER, Mr. ALBERT.

5. CHEMICAL MICROSCOPY AND HÆMATOLOGY—A laboratory course for senior students, devoted to practical study of blood, urine, sputum, stomach contents, vomitus, fæces, milk, dropsical effusions, and cyst contents, and instruction in such methods of clinical diagnosis as involve the usual microscopic and bacterial analysis. Special attention is given to the rapid diagnosis of fresh material, uterine curettings, and the early signs of malignancy. Senior year, two hours each week during the first semester and first term of the second semester. Professor BIERRING, Dr. KEMMERER, Mr. ALBERT.

6. AUTOPSIES—Post-mortem examinations are made of all available cases. Since no stated time can be set for these demonstrations, members of both junior and senior classes are excused from other work in hand to attend the clinical autopsies.

Students are permitted to assist at post-mortem examinations and are instructed in the methods of making such examinations and of recording proper protocols of the results.

The microscopic findings are studied in each case for comparison with the macroscopic changes. Professor BIERRING, Dr. KEMMERER, Mr. ALBERT.

7. ADVANCED WORK AND SPECIAL RESEARCH—Opportunity is afforded to senior and advanced students to pursue special researches in pathology and bacteriology.

Candidates for higher degrees and members of the Graduate College can carry on special work in pathology and bacteriology as leading up to such degrees in the pathological laboratory under the supervision of the head of the department. Professor BIERRING.

DEPARTMENT OF THEORY AND PRACTICE OF MEDICINE

PROFESSOR LITIG; DR. BURGE, DR. DECKER.

The instruction is both by lectures and by clinics. Many of the subjects treated in the didactic course find illustration in

the hospital amphitheater, and pathological study is facilitated by post-mortem examinations, as well as by wet and dry preparations from the museum.

1. THEORY AND PRACTICE OF MEDICINE—Lectures to the junior and senior classes. First semester, two hours each week; second semester, four hours each week. Professor LITTIG.

2. DISEASES OF THE NERVOUS SYSTEM—Lectures to the junior and senior classes. First semester, two hours each week. Professor LITTIG.

3. RECITATIONS AND REVIEWS in the above subjects. Senior class, two hours each week; junior class, one hour each week; throughout the year. Professor LITTIG.

4. CLINICAL INSTRUCTION IN GENERAL MEDICINE—Junior and senior years, two hours each week throughout the session. Professor LITTIG.

5. BEDSIDE INSTRUCTION IN CLINICAL MEDICINE—Senior year, one hour each week. Professor LITTIG.

6. PHYSICAL DIAGNOSIS—A course of practical instruction in the use and application of all the instruments and methods of precision. Junior year. Dr. BURGE.

7. PÆDIATRICS—This subject is presented by means of lectures and recitations. Special stress is laid upon diagnosis, particularly of the contagious diseases and those of the gastro-enteric tract. The practical treatment of the common ills of infancy and childhood receives careful attention. Senior year, first semester, second term, twelve hours. Dr. DECKER.

DEPARTMENT OF SURGERY

PROFESSOR MIDDLETON; DR. LITTIG, DR. BIERRING, DR. HARRIMAN, DR. CRAWFORD, DR. MCCLINTOCK.

This subject is graded in the third and fourth years, and is taught by lectures and recitations; by laboratory work, in minor surgery, operations on the cadaver, and surgical technique; by ward classes, and by clinics in the University Hospital, at which operations in every branch of surgery are open to the class.

1. THE PRINCIPLES OF SURGERY—Hyperæmia; simple inflammation; infective inflammation; the process of repair; gangrene; shock; fever; surgical fevers; septicæmia; pyæmia; erysipelas; hospital gangrene; tetanus; hydrophobia; actinomyco-

sis; anthrax; glanders; snake-bite; tuberculosis; surgical tuberculosis of joints and bones; syphilis. Lectures and recitations three hours a week, first semester, third and fourth years. Professor MIDDLETON.

2. **OPERATIVE TECHNIQUE**—Lectures and practical work on operative procedures, principles of asepsis, antiseptics, and sterilization; preparation of patient and operator, of instruments and operating rooms; anæsthesia and anæsthetics; hæmostasis; ligatures; sutures; dressings and care of wounds. The technique of kidney, gall-bladder, stomach, and intestinal surgery, and other operations, such as trephining, tracheotomy and intubation, are illustrated before the class on the lower animals under antiseptic regulations. One hour a week, first semester, junior year. Dr. CRAWFORD.

3. **MINOR SURGERY, BANDAGING, AND DRESSING**—Practical instruction, by demonstration and practice, in the various manipulations of Minor Surgery, including the application of splints, and bandaging. Two hours a week, first semester, third year. Dr. LITTIG.

4. **TUMORS**—A special course on the classification, description, and pathology of tumors, with general principles of treatment. Lectures and recitations, with laboratory demonstration. One hour a week, first semester, fourth year. Dr. BIERING.

5. **THE PRACTICE OF SURGERY AND ORTHOPEDIC SURGERY**—Injuries and diseases of regions and systems; fractures and dislocations; deformities, with general principles of pathology and treatment. Lectures and recitations, four hours a week, second semester, third and fourth years. Professor MIDDLETON.

6. **OPERATIVE SURGERY**—A dissecting-room course, consisting of all the operations in modern surgery, performed by sections of the class, under the supervision of instructors. Two hours a week, first semester, fourth year. Dr. MCCLINTOCK.

7. **WARD CLASSES**—Examination, observation, and dressing of patients, in wards of the University Hospital, in company with the Assistant to the Chair of Surgery. Class in sections, one hour a week, first and second semester, fourth year. Dr. LITTIG.

8. **CLINICAL SURGERY**—Clinics, at which advanced students are required to assist, and at which operations and

manipulations in general surgery are demonstrated to students of third and fourth years, and to other students whose schedule does not prevent attendance. Three to four hours a week throughout the third and fourth years. Professor MIDDLETON.

9. ANÆSTHETICS—During the senior year each member of the class will receive practical instruction in the production of general and local anæsthesia, under the supervision of the anæsthetist of the surgical clinic. Class in sections, one section a week, senior year. Dr. HARRIMAN.

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

PROFESSOR GUTHRIE.

OBSTETRICS

This course embraces a thorough training in diagnosis of pregnancy, the physiology and pathology of pregnancy, diagnosis of presentation and positions, the management of labor, normal and abnormal, measurements of the pelvis, and a complete course upon surgical obstetrics, taught by wet specimen, upon the manikin, and upon patients when practicable.

The class is divided into sections for study and drill in diagnosis and in operative obstetrics.

1. DIDACTIC LECTURES—Two each week during the session upon Obstetrics, including a discussion of physiology and pathology, management of gestation, management of labor, normal and abnormal labor, management of puerperium, dystocia, and care of the new-born child. Junior year.

2. OPERATIVE OBSTETRICS—Course of six lectures, illustrating by both dried and wet specimens. Senior year.

3. COURSE UPON THE MANIKIN for diagnosis and demonstrating the use of forceps and other mechanical appliances and in obstetrical manipulation, equivalent to one hour each week during the session. Senior year.

GYNECOLOGY

The instruction in this subject for both third and fourth year classes combines didactic lectures, recitations, and demonstrations, with clinical demonstrations in both major and minor operative Gynecology. The following courses are given:

4. BEDSIDE CLINIC—A ward clinic will be held every week, where each student will have an opportunity to examine the patient and to observe both the post-operative condition and

the treatment of all operative cases. The merits of each case are discussed and indications for after treatment carefully studied. Students will be drilled in the matter of special diet and hygiene. Senior year.

5. **WARD CLASS** in diagnosis will be given each week throughout the year, at which sections will be instructed in the matter of securing good histories and drilled in taking the same. They will be taught how to conduct an examination and from history and physical condition to form correct diagnoses. Senior year.

6. **DIDACTIC LECTURES**—One each week upon Gynecology. The first semester is occupied with lectures on the general scope of the subject, methods of examination, etiology, pathology, and general management of gynecological patients. The rest of the course will be devoted to a discussion of special conditions, operative and gynecological technique. Junior and senior years.

7. **CLINIC** will be held each week, demonstrating methods of examination and diagnosis, illustrating both major and minor gynecological operations. A constant effort will be made to instruct in modern methods and improved technique. Junior and senior years.

8. **GYNECOLOGICAL LANDMARKS**—One hour each week during the first semester is devoted to a study of landmarks and cultivation of touch in palpating pelvic viscera.

DEPARTMENT OF OPHTHALMOLOGY

PROFESSOR DALBEY.

The lectures are delivered and the clinic is held in the University Hospital.

1. Lectures and recitations on the physiology and anatomy of the eye and orbit, diseases of conjunctiva, lachrymal apparatus, and external muscles. One hour each week, first semester, senior year.

2. Lectures and recitations on the internal diseases of the eye, including the diseases of the retina, choroid, ciliary body, iris, optic nerve, etc., and on refraction. One hour each week, second semester, senior year.

3. Clinical lectures, demonstrations, and operations on the eye. In this work the class will be divided into sections of eight so that they may be able to see better the minutiae of the

operations on the eye. The material will be so arranged that each section will see, at least once, all the ordinary operations. Two hours a week, senior year.

DEPARTMENT OF OTOTOLOGY AND RHINO-LARYNGOLOGY

PROFESSOR ROBERTSON; DR. WHITEIS.

1. ANATOMY, PHYSIOLOGY, AND DISEASES OF THE NOSE AND THROAT—Lectures and recitations. Senior year, first semester, one hour each week. Professor ROBERTSON.

2. ANATOMY, PHYSIOLOGY, AND DISEASES OF THE EAR—Lectures and recitations. Senior year, second semester, one hour each week. Professor ROBERTSON.

3. PRACTICAL CLINICAL INSTRUCTION at University Hospital in diagnosis of nose, throat, and ear; in methods of examination; in the practical use of instruments; and in the application of remedies, operative and medical. Senior year, two hours each week. Professor ROBERTSON.

4. PRACTICAL INSTRUCTION in the after treatment of medical and surgical cases, with the application of dressings. Senior year, one hour each week. Dr. WHITEIS.

MEDICAL JURISPRUDENCE

The course is opened with the consideration of the nature and purposes of law, then of laws affecting the practice of medicine. Malpractice is discussed and the liability to the physician by the patient and others, including that of municipalities for the treatment of patients. The questions of legal insanity, expert evidence and expert witnesses, hypothetical cases, causes of death, and post mortem examinations follow, and, in conclusion, the subject of state and local boards of health, quarantine regulations, etc. Senior year, first semester, twelve hours. Judge WADE.

INSANITY

This subject is discussed as concisely as possible with the special needs of the general practitioner constantly in view, and the material that appears at the clinic from time to time

during the term is utilized in illustration. Senior year, first semester. Twelve lectures, with clinical instruction at the Hospital for the Insane at Independence. Dr. HILL.

HYGIENE

Instruction in Hygiene, in addition to that given in the courses of Pathology, Bacteriology, and Physiological Chemistry, will consist of a course of lectures and recitations. In this course will be considered the predisposing factors of disease; the principles on which immunity depends; the relation of ventilation, water-supply, food, and the disposal of waste to the public health; climatology, heredity, vital statistics and other subjects. A syllabus of the lectures will be available which will contain references to the literature of each subject. Junior year, first semester, twenty-six hours. Dr. CLARKE.

DERMATOLOGY

The instruction in this branch is largely clinical, students of the class being assigned patients for examination, diagnosis, and treatment. Didactic lectures and recitations are given on the rarer forms of disease. Senior year. Throughout the session, one hour each week. Dr. KESSLER.

DENTISTRY

The lectures on this subject will comprise such principles of dental pathology and therapeutics as are essential to the practitioner of medicine. Instruction will be given in the application of medicinal appliances for the correction of cleft palate, also in methods of applying retention in fractures of maxilla. Junior year, second semester, five hours. Dr. BREENE.

COMBINED COURSES

Arrangements have been made with the faculty of the College of Liberal Arts by which it will be possible for a student to receive credit in one college for work done in the other, thereby obtaining a degree in each in a shorter time than if the two courses were taken independently. These combined courses are especially recommended to all students who intend to enter the profession of medicine.

**COMBINED COURSE LEADING TO THE DEGREES
OF B. S. AND M. D.**

FIRST YEAR	SECOND YEAR
German—5	German—3
Mathematics—5	English—2
Drawing—3	Physics—5
English—2	Zoology—5
Military Drill—3	Animal Physiology—2
	Military Drill—3
THIRD YEAR	FOURTH YEAR
Botany—5	Medical work exclusively
Chemistry—5	
Animal Morphology—5	
Military Drill—3	
FIFTH YEAR	SIXTH YEAR
Medical work exclusively	Medical work exclusively
SEVENTH YEAR	
(Two terms)	
French, 15 term hours.	
Elective, in College of Liberal Arts, 15 term hours	

It is possible for students of marked ability to complete this course in six years by taking one year's work in French and one year's work in an elective in the College of Liberal Arts, in addition to the medical work, in the fifth and sixth years of the combined course or wherever it is practicable. Both degrees will be conferred at the end of the sixth year if the work has been completed, and to obtain them it must be taken as here outlined, no substitutions being permitted.

**COMBINED COURSE LEADING TO THE DEGREES
OF PH. B. AND M. D., OR B. A. AND M. D.**

By selection of the above scientific branches as electives in the courses leading to the degrees of Ph. B. or B. A. in the College of Liberal Arts it will be possible to obtain either of these degrees with that of M. D. in seven years. For the details of these courses the announcement of that College should be consulted.

COMBINED COURSE LEADING TO THE DEGREES
OF M. D. AND D. D. S.

By arrangement with the Dental Faculty students can obtain the degrees of Doctor of Medicine and Doctor of Dental Surgery by taking four years in the College of Medicine, and after that two years in the College of Dentistry. The work is not so arranged that the dental branches can be taken first. The requirements for admission are the same as to the College of Medicine.

TEXT-BOOKS AND BOOKS OF REFERENCE

The following are recommended by the faculty :

Medical Dictionary—Gould, Duane, Dunglison.

Anatomy—Gray, Quain, Gerrish, Morris, Treve's Surgical Applied Anatomy.

Dissectors—Holden, Heath, Ellis.

Comparative Anatomy—Wiedersheim, Jeffery Bell, Howell.

Physiology—American Text-Book, Kirk, Stewart, Stirling.

General Chemistry—Simon, Bartley, Roscoe and Schorlemmer.

Physiological Chemistry—Rockwood, Vaughan and Novy.

Urine Analysis—Purdy, Neubauer and Vogel, Ogden.

Toxicology—Wormley, Taylor.

Surgery—Park, American Text-Book of Surgery, DaCosta, Stimson on Fractures and Dislocations, Wharton's Minor Surgery and Bandaging, Warren's Surgical Pathology, Senn on Tumors.

Pathology—Stengel, Ziegler, Thoma, Delafield and Prudden, Green.

Bacteriology—Abbott, McFarland, Park, Crookshank, Sternberg.

Practice of Medicine—Osler, Struempel, Tyson, Anders, Thompson, Eichorst. American Text-Book of Theory and Practice of Medicine, Albutt.

Medical Diagnosis—Vierordt, Musser, DaCosta, Flint.

Obstetrics—American Text-Book of Obstetrics, Lusk, Davis, Parvin, Leishman, Playfair, King, Dorland.

Obstetric Surgery—Grandin and Jarmin.

Embryology—Minot, Manton.

Gynecology—Skene, Thomas and Munde, Garrigues, American Text-Book, Pozzi, Davenport, May's Manual, Clinical Gynecology, Keating and Coe, Dudley.

Materia Medica—White and Wilcox, Potter, Cushny.

Therapeutics—Hare, Wood, Farquharson.

Diseases of Children—Holt, Starr's American Text-Book, J. L. Smith, Goodhart.

Medical Jurisprudence—McClellan's Civil Malpractice, Wharton and Stille, Beck, Elwell.

Histology—Stoehr, Piersol, Schafer, Stirling.

Ophthalmology—Fuchs, Juler, Noyes, Nettleship on the Eye.

Otology and Rhino-Laryngology—Bosworth, Burnette, Kyle, McDonald, Deuch, Politzer, Roosa, Buck, Bacon.

Insanity—Chapin, Mental Diseases; Berkley, Nervous and Mental Diseases; Church and Peterson.

Dermatology—Jackson, Hardaway, Shoemaker.

Hygiene—Notter and Firth, Abbott.

Dietetics—Thompson, Pavy.

Text-Books and books of reference can be obtained at an average cost per volume of from \$2.00 to \$5.00, or \$15.00 to \$20.00 per year.

The thorough study of a single text-book in each department is of far greater advantage to the student during his college course than the cursory reading of several. It is therefore advised that a single work in each branch be chosen, using any of the others for reference. The first one of each of the above lists is preferred.

REQUIREMENTS FOR ADMISSION

1. Each applicant for admission must present to the Secretary of the Faculty of the College of Medicine a creditable certificate of good moral character, signed by two physicians of good standing in the state from which he comes.

2. The following classes of applicants may be admitted without examination :

a. Graduates or matriculates of reputable colleges, who present diplomas or certificates of honorable dismissal from such colleges, together with a special certificate that they have studied Latin at least one year.

b. Graduates of normal schools established by state authority, who present diplomas or certificates of graduation, to-

gether with a special certificate that they have studied Latin at least one year.

c. Graduates of accredited or other approved secondary schools who present thirty-six preparatory credits, including at least one year of Latin. One preparatory credit is given for the successful study of one secondary school subject during a term of twelve weeks with five recitations or exercises per week, or an equivalent. These preparatory credits must be properly certified by the Superintendent or the Principal of the school from which the applicant comes, on the enclosed blank form or one which may be obtained on application to the President of the University, or the Secretary of the Faculty of the College of Medicine.

3. Applicants who present *thirty* preparatory credits properly certified, as indicated under 2 c, may be admitted without examination, *on condition that they complete their preparation within one year from the date of their admission.* No applicant whose deficiencies exceed *six* preparatory credits will be admitted as a candidate for graduation.

4. In September, 1901, applicants who do not present credentials as described above will be admitted without conditions, only upon passing examinations in the following preparatory subjects:

a. Latin (one year)	8	preparatory credits
b. English	3	preparatory credits
c. United States History	1½	preparatory credits
d. Arithmetic	1½	preparatory credits
e. Algebra, through quadratics	4½	preparatory credits
f. Plane and Solid Geometry	4½	preparatory credits
g. Physics (one year)	3	preparatory credits
h. Botany, or some other science	1½	preparatory credits

5. The applicant who passes examinations in all of the subjects enumerated under 4, except such as stand for a total of *six* preparatory credits, may be admitted *on the condition stated in paragraph 3.*

6. Applicants who present proper certificates covering all or any part of the preparatory studies designated under 4 for examination, may be admitted upon passing examinations in enough *other* preparatory studies to bring the number of their preparatory credits up to at least *thirty*, *on the condition stated in paragraph 3.*

7. All applicants who are admitted without Latin will be required to take the regular one-year course in Medical Latin

specially provided by the University, the fee being \$5.00 for the course. This course is not a part of the regular course in medicine, but is offered as a convenience for such applicants for admission as have not studied Latin. The class in this course will be organized on Monday, September 23, 1901. Students who take this course are required to pay the fee at the time when they pay the first installment of their regular tuition.

8. Students who enter with conditions in *other* preparatory studies than Latin must meet the conditions in either one of the following ways :

a. Pass the regular entrance examinations in these studies, to be held one year from September, 1901.

b. Present certificates on forms provided by the University and signed by *tutors who have been previously approved.*

9. Students entering from other colleges of medicine with advanced standing must present credentials for preparatory work, or be examined as stated above.

10. It is urged that any one who expects to enter the College of Medicine next September send all certificates of preparatory work to the University Examiner *as early in the summer as possible, and certainly before September 1.* If the credentials are satisfactory a card of admission will be sent to the applicant at once. Upon arriving in the city he should present this card to the Dean, or the Secretary of the Faculty, for signature.

ENTRANCE EXAMINATIONS

Any person who expects to enter the College of Medicine in September, 1901, should be careful to learn before the opening of the University just what entrance examinations he must take. He can learn this by addressing the President of the University, the Secretary of the Faculty, or the University Examiner.

It is necessary that each applicant who is to be examined arrive in the city early enough to be present *at his first examination as indicated in the programme given below.* He should present himself at once at the office of the University Examiner, who will give all necessary directions.

PROGRAMME OF ENTRANCE EXAMINATIONS

MONDAY, SEPTEMBER 16, TO WEDNESDAY, SEPTEMBER 18, 1901.

Latin,	3 to 12 credits, Monday,	3:30 p. m.
German,	3 to 6 credits, (or more) Monday,	3:30 p. m.
Algebra,	4½ credits, Tuesday,	8:00 a. m.
Plane and Solid Geometry,	4½ credits, Tuesday,	10:00 a. m.
General History,	3 credits, Tuesday,	1:00 p. m.
English History or American History,	1½ credits, Tuesday,	2:30 p. m.
Civics or Economics, English and English Grammar,	1½ credits, Tuesday, 3 credits, Tuesday,	3:30 p. m. 4:30 p. m.
Literature,	3 credits, Wednesday,	8:00 a. m.
Physics,	3 credits, Wednesday,	9:30 a. m.
Botany,	1½ credits, Wednesday,	11:00 a. m.
Physical Geography,	1½ credits, Wednesday,	1:30 p. m.
Physiology,	1½ credits, Wednesday,	2:30 p. m.
Arithmetic,	1½ credits, Wednesday,	3:30 p. m.

All students having deficiencies in their medical work will appear for examination according to the following schedule:

WEDNESDAY, SEPTEMBER 18.

Histology,	8:00 a. m.
Physiology,	10:00 a. m.
Pathology,	10:00 a. m.
Anatomy,	11:00 a. m.
Materia Medica,	3:00 p. m.
Chemistry,	4:00 p. m.

REQUIREMENTS FOR ADMISSION TO THE COMBINED COURSE LEADING TO THE DEGREES

PH. B. AND M. D., OR B. A. AND M. D.

1. Latin, including prose composition,	12 preparatory credits
2. English and Literature,	5 preparatory credits
3. History (may include Civics),	4 preparatory credits
4. Algebra, through Quadratics, Theory of Exponents, and Progressions,	4½ preparatory credits
5. Plane and Solid Geometry,	4½ preparatory credits
6. Electives (additional accreditable work in foreign language, English, History, or Science),	6 preparatory credits
Total,	36 preparatory credits

REQUIREMENTS FOR ADMISSION TO THE COM-
BINED COURSE LEADING TO THE DE-
GREES B. S. AND M. D.

1. Some one foreign language (Latin preferred,* but German or French accepted),	6	preparatory credits
2. English and Literature,	5	preparatory credits
3. History (may include Civics),	4	preparatory credits
4. Algebra, through Quadratics, Theory of Exponents, and Progressions,	4½	preparatory credits
5. Plane and Solid Geometry,	4½	preparatory credits
6. Electives (additional accreditable work in foreign language, English, History, or Science),	12	preparatory credits
Total,	36	preparatory credits

For a detailed statement of the requirements for admission, see the latest announcement of the College of Liberal Arts.

ADVANCED STANDING

In all cases those who enter from other schools with advanced standing must comply with the requirements for admission.

Students from other accredited medical colleges who have attended one course of lectures will be admitted to the sophomore class upon passing an examination in the branches taught during the first year.

Those who have attended two courses will be admitted to the junior class upon passing an examination in the branches taught during the first and second years.

Those who have attended three courses will be admitted to the senior class upon passing an examination in the branches taught during the first, second, and third years.

Graduates from colleges in good standing, who, during their college course, have devoted regular time to the study of the following branches: Biology, Botany, Chemistry, Physics, Histology, Physiology, and Human Anatomy, may be admitted to the second year of the medical course.

*If one year of Latin is not included in the preparatory work it must be made up at the University.

The number of hours following has been adopted as covering the above requirements :

	DIDACTIC	LABORATORY
General Biology with Physiology, especially the physiology of circulation, respiration, nerve and muscle, and excretion,	180	
Botany, collegiate grade,	72	
Mammalian Anatomy with comparative anatomy (human),	60	60
Zoology, not including Anatomy,	120	120
Chemistry, non-metallic, metallic, and organic, including stoichiometry,	100	200
Physics,	180	
Histology,		
Of cells and tissue,	32	48
Digestive tract, accessory glands, etc.,	22	33
Respiratory tract, skin, and nervous system,	36	72
Also genito-urinary histology,	—	—
Embryology,	60	including laboratory

An opportunity will be given at this College for making up the human dissection of the freshman year.

Graduates from literary or scientific colleges having pre-medical courses which have been approved by this faculty will be admitted to the sophomore class upon the presentation of certificate of graduation from such courses. All others should present specific statements of the work completed before graduation with the above as the minimum amount.

Colleges now having such courses or announcing the intention of establishing them are:

Coe College;
Iowa College;
Des Moines College;

Simpson College;
Western College.

Students entering under these conditions must take instruction in Materia Medica and Pharmacy during the first year of their medical course, and at the end of their first session must pass examinations in all branches of the freshman year not previously pursued by them. They must also have completed the work required of the sophomore class in the dissection of the human subject.

REQUIREMENTS FOR GRADUATION

1. The candidate must be twenty-one years of age.
2. He must be known to be of unexceptional moral character.
3. The time of study must include attendance upon at least four full courses of lectures, the last of which must be taken in this institution. The time occupied by each of the four courses of lectures shall not be less than twenty-six weeks, and no two of the four courses shall be within the same year.
4. The candidate must have satisfactorily completed at least four courses in Practical Anatomy.
5. The deportment during the term must have been unexceptionable.
6. Attendance upon all lectures, clinics, and other instruction in the course must have been in accordance with the requirements of the College.
7. All members of the freshman class will be examined in General Chemistry, Histology, Physiology, and Anatomy at the end of that year. The examination in General Chemistry and Histology will be final should the student show the required proficiency.
8. Members of the sophomore class at the end of that year must pass satisfactory examinations in Anatomy, Physiology, Physiological Chemistry, General Pathology, Materia Medica, and Pharmacy.
9. Members of the junior class will be given a final examination at the end of the year in Therapeutics, Obstetrics, Hygiene, Special Pathology, and Bacteriology.

In case of failure to pass any of these examinations, the student must be re-examined at the opening of the next session. If he fail in this second examination, he will be allowed to present himself for re-examination only after attendance upon another course of lectures. A failure in more than two branches at this September examination will debar the student from admission to a higher class.

Students of the senior class who are candidates for the degree of Doctor of Medicine must, before May first, present to the Secretary of the Faculty certificates of legal age. During the last week of the term, having complied with the other requirements, they must pass a satisfactory examination in Practice of Medicine, Surgery, Ophthalmology,

Gynecology, Pædiatrics, Dermatology, Otology, and Rhinology, and in any other subjects taught, if so directed by the faculty at the beginning of the term.

Class standing and recitation marks, together with demonstrators' reports and final examinations, will be taken into consideration when determining the candidate's fitness to receive the medical degree.

MEDICAL BUILDING

On the night of March 9 the Medical Building, which did not include the Hospital nor Chemical Laboratory, was destroyed by fire. There was immediately appropriated from the emergency fund of the state \$15,000, which will be used in part for the erection of a temporary structure, on the old site. The greater part has been given by the Board of Regents for the purchase of apparatus and material. The amount will be sufficient for the complete equipment of the laboratories of Pathology, Histology, Physiology, and Anatomy, replacing practically all old microscopes and other apparatus with new. Two members of the faculty will spend most of the time before the opening of the session in Europe collecting these and pathological specimens.

The laboratory work will be carried on during the next year in the fire-proof building, which will be completed this summer for the College of Liberal Arts. The College of Medicine will open its next session in better condition to carry on its work than ever before.

The Board of Regents have instructed the faculty to prepare plans for a fire-proof building with all modern facilities, of sufficient size to accommodate amply the present attendance and to provide for future growth.

Physicians are earnestly requested to send to the Curator of the Museum, Professor W. L. Bierring, any specimens of healthy, morbid, or comparative anatomy. For all such favors credit will be given by labeling the specimens with the name of the donor before placing them in the museum.

UNIVERSITY HOSPITAL

The Twenty-sixth General Assembly levied a tax for the erection of new buildings for the University, and by the action of the Board of Regents the first year's tax, somewhat more

than fifty thousand dollars, has been devoted to the building and equipment of a hospital which was opened for the reception of patients in January, 1898. The University Hospital is in all respects modern and without a superior in the West. With an administration building thoroughly furnished, with large and commodious wards, as well as private rooms, with a clinical amphitheater that will comfortably seat two hundred or more, and with separate surgical, gynecological, medical, ophthalmological, and laryngological operating rooms, together with a well supplied Free Dispensary, open throughout the year, but little is left to be desired.

CLINICS

The Clinics have been well and abundantly supplied with material. The patronage of the Hospital, which is open for the reception of patients during the year, is such that a variety of cases is presented for operation and treatment.

Every case is fully utilized as a means of instruction by a system of examination in which advanced students are required to diagnosticate disease and suggest treatment, before the class, subject to the correction of the clinical teacher. Members of the senior class examine patients in the hospital wards before the medical and surgical clinics. They also visit the wards under the direction of a member of the hospital staff, when opportunity is given to observe dressings, to note the progress of cases, and to make such examinations as may be consistent with the comfort and safety of the patients.

CLINICAL PATIENTS

Medical cases should be referred to Professor L. W. Littig; surgical cases to Professor W. D. Middleton; gynecological cases to Professor J. R. Guthrie; eye cases to Professor J. W. Dalbey; ear, nose, and throat cases to Professor C. M. Robertson; dermatological cases to Dr. J. B. Kessler.

RESIDENT PHYSICIANS

Appointments as Resident Physicians in state and other institutions are made each year from the graduates of the College of Medicine. These are awarded to such of the appli-

cants as the faculty judges best prepared for the positions, the successful candidates being allowed to select, in the order of their rank, from those which are available.

For the ensuing year the appointments are:

Dr. Charles H. Cretzmeier, University Hospital;

Dr. Charles D. Harlan, Mercy Hospital, Davenport.

TUITION

The fee for tuition is \$65.00 for each year, of which \$45.00 must be paid at the time of registration, and the balance on or before January 10. All fees must be paid when due, to the Secretary of the Board of Regents, William J. Haddock, and students who do not pay these when due will be suspended from the College until payment has been made.

In the combined courses the fees are \$25.00 for each of the first three years in the College of Liberal Arts, and \$75.00 for each of the last three years of the course, paid as medical fees. Students entering the College of Medicine from other schools with advanced standing will pay \$10.00 for dissecting material used in making up deficiencies in this branch. For students taking a partial course the fees are \$10.00 per year for each branch except dissecting, where the fee is \$15.00.

There are no extra fees whatever, but for each laboratory course in chemistry, also for that in practical pharmacy, there is required a deposit of \$3.00 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student on presentation of the certificate of the professor in charge of the laboratory in question.

The above statement is now in effect, and will be understood to apply to all students in the College, entirely irrespective of the date of matriculation. For those who enter in September, 1901, and continue in regular attendance until the time of graduation there will be, during their course, no increase in fees.

Alumni of the College will be admitted to lectures and clinics free of charge, but will pay the usual laboratory fees. Graduates of other medical colleges which are recognized by this College, will, when not candidates for a degree, be admitted to full lecture privileges upon paying the matriculation fee of \$5.00 and a fee of \$10.00 with the usual laboratory fees.

Seats will be assigned by classes in the order of registration at the University.

A certificate of attendance will be issued to each student at the close of the session.

Students upon arrival will apply for all needed information to the Secretary, Dr. E. W. Rockwood.

NECESSARY YEARLY EXPENSES

Tuition fee, which includes all University charges except laboratory breakage-----	\$ 65 to \$ 65
Breakage-----	1 to 2
Room rent, 9 months-----	18 to 72
Board, 36 weeks-----	72 to 108
Fuel and light-----	6 to 15
Books-----	12 to 20
Total-----	\$164 to \$282

Graduates of this College are requested to acquaint the Secretary of the Faculty immediately with their postoffice addresses and to inform him promptly of any change of residence.

For any further information address Dr. E. W. Rockwood,
Secretary of the Medical Faculty, Iowa City, Iowa.

UNIVERSITY TRAINING SCHOOL FOR NURSES

There is connected with the hospital of the College of Medicine of the University a School for Nurses which offers a three years' course to women who desire to enter the profession of nursing. Lectures will be delivered during the year by members of the Medical faculty.

The following is the course of lectures for 1900-1901:

FIRST YEAR

Ethics of Nursing	- - - - -	DR. MIDDLETON
	October 3	
General Observation and Recording of Symptoms	-	DR. LITTE
	October 10, 17	
Bacteriology	- - - - -	DR. BIERRING
	October 22, 29, November 5, 12	
Hygiene	- - - - -	DR. CLARK
	October 24, 31, November 7, 14	
Materia Medica	- - - - -	DR. CHASE
	November 21, 28, December 5, 12, 19	
Obstetrics	- - - - -	DR. GUTHRIE
	November 20, 27, December 4, 11, 18	
Gynecology	- - - - -	DR. GUTHRIE
	January 8, 15, 22, 29, February 5	
Surgery	- - - - -	DR. MIDDLETON
	January 9, 16, 23, 30, February 6	
Infectious Diseases	- - - - -	DR. BIERRING
	February 25, March 4, 11, 18, 25	
Food and Dietetics	- - - - -	DR. ROCKWOOD
	March 20, 27, April 3, 10	
Nursing in Internal Diseases	- - - - -	DR. LITTE
	April 1, 8, 15, 18, 22, 25, 29, May 6	

SECOND YEAR

Ethics of Nursing	- - - - -	DR. MIDDLETON
	October 3	
General Observation and Recording of Symptoms	-	DR. LITTE
	October 10, 17	
Bacteriology	- - - - -	DR. BIERRING
	October 22, 29, November 5, 12	
Hygiene	- - - - -	DR. CLARK
	October 24, 31, November 7, 14	
Materia Medica	- - - - -	DR. CHASE
	November 21, 28, December 5, 12, 19	
Surgery	- - - - -	DR. MIDDLETON
	January 9, 16, 23, 30, February 6	
Infectious Diseases	- - - - -	DR. BIERRING
	February 25, March 4, 11, 18, 25	

The Eye	- - - - -	DR. DALBEY
	February 13, 20	
Ear, Nose, and Throat	- - - - -	DR. ROBERTSON
	February 15, 22	
Children	- - - - -	DR. WHITEIS
	February 27, March 6, 13	
Food and Dietetics	- - - - -	DR. ROCKWOOD
	March 20, 27, April 3, 10	
Nursing in Internal Diseases	- - - - -	DR. LITTEG
	April 1, 8, 15, 18, 22, 25, 29, May 6	

THIRD YEAR

Ethics of Nursing	- - - - -	DR. MIDDLETON
	October 3	
General Observation and Recording of Symptoms	- - - - -	DR. LITTEG
	October 10, 17	
Bacteriology	- - - - -	DR. BIERRING
	October 22, 29, November 5, 12	
Materia Medica	- - - - -	DR. CHASE
	November 21, 28, December 5, 12, 18	
Obstetrics	- - - - -	DR. GUTHRIE
	November 20, 28, December 4, 11, 18	
Gynecology	- - - - -	DR. GUTHRIE
	January 8, 15, 22, 29, February 5	
The Eye	- - - - -	DR. DALBEY
	February 13, 20	
Ear, Nose, and Throat	- - - - -	DR. ROBERTSON
	February 15, 22	
Children	- - - - -	DR. WHITEIS
	February 27, March 6, 13	
Physiology	- - - - -	DR. DEAN
	February 26, March 5, 12, 19, 26	
Anatomy	- - - - -	DR. HARRIMAN
	April 12, 19, 26, May 3, 10	

The Principal will lecture upon Hospital Administration and Ward Management and will give instruction in massage. There will be a complete course in invalid cookery. The lectures will be supplemented by recitations as well as by practical work in the wards and operating room. A diploma will be awarded at the end of the course. Candidates may be admitted when vacancies occur.

For further information application should be made to the Training School for Nurses, University Hospital, Iowa City, Iowa.

OFFICERS AND ATTENDANTS OF THE HOSPITAL

JOHN W. HARRIMAN, M. D., FLORENCE E. BROWN, PH. B.
Director. Superintendent.

EUTELLIS A. CANTONWINE,
Resident Physician.

JOHN G. MUELLER, M. D., SUSAN G. PARRISH,
Anæsthetiser at the Gyneco- Principal of the Training
logical Clinic. School.

NURSES

SENIORS

ETHEL HILL, EMMA THOMAS,
MARGARET SAILOR.

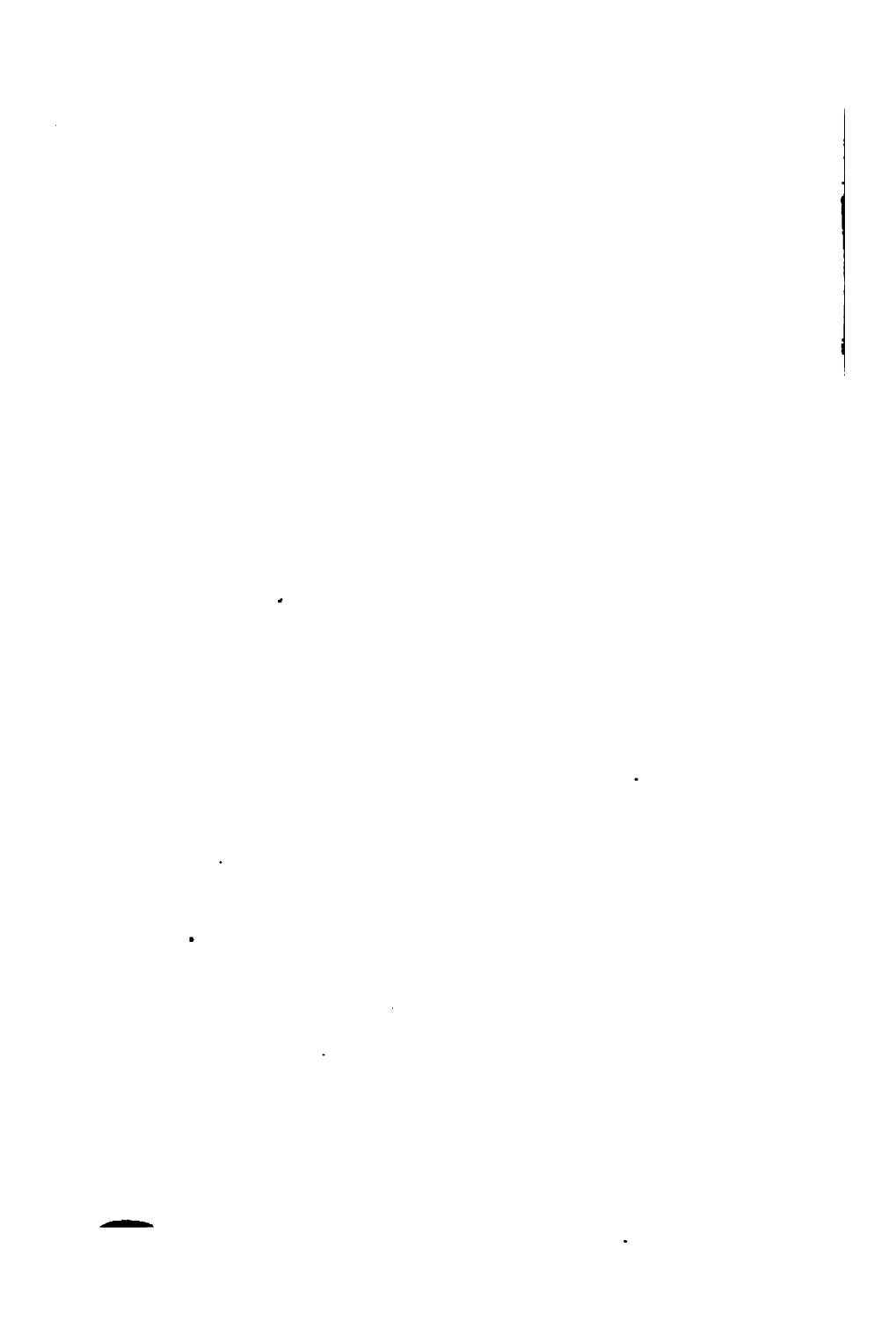
JUNIORS

AGNES ALLEN, RENA WHITE,
WILHELMINA BLIM, ORA MATTHEWS,
STELLA CHASE, LETTA MOORE,
JESSIE CORLETT, EDITH WHITE,
MAUD HAYFORD.

SPECIAL STUDENT

LAURA BERCHENBRITER.

College of Homœopathic
Medicine



COLLEGE OF HOMŒOPATHIC MEDICINE

FACULTY AND INSTRUCTORS

GEORGE E. MACLEAN, PH. D., LL. D.,

President of the University.

JAMES G. GILCHRIST, M. A., M. D.,

Professor of Surgery and Surgical Gynecology. Secretary. Director of the Hospital.

CHARLES H. COGSWELL, M. D.,

Professor of Obstetrics and Diseases of Women.

FRANK J. NEWBERRY, M. S., M. D., O. et A. Chir.,

Professor of Ophthalmology, Otology, and Physical Diagnosis and Diseases of the Respiratory Tract.

GEORGE ROYAL, M. D.,

Professor of Materia Medica and Therapeutics. Dean of the Faculty.

FREDERICK BECKER, M. D.,

Professor of Theory and Practice.

LINTON W. STRUBEL, M. D.

Assistant to the Chair of Materia Medica.

Assistant to the Chair of Obstetrics.

RAYMOND E. PECK, M. D.,

Assistant to the Chair of Surgery.

LEORA JOHNSON, M. D.,

Clinical Assistant to the Chair of Surgery.

BENJAMIN R. JOHNSTON, M. D.,

Assistant to the Chair of Theory and Practice, and Lecturer on Pædiology.

WILLIAM L. BYWATER, M. D.,

Assistant to the Chair of Ophthalmology, Otology, and Physical Diagnosis and Diseases of the Respiratory Tract, and Lecturer on Diseases of Women.

BURT E. FULLMER, Senior,

ARCHIE B. CLAPP, Junior,

Hospital Internes.

MARY A. RAFF,

Hospital Superintendent.

- JOHN W. HARRIMAN, M. D.,**
Professor of Anatomy.
- ELBERT W. ROCKWOOD, M. A., M. D.,**
Professor of Chemistry and Toxicology.
- WALTER L. BIERRING, M. D.,**
Professor of Pathology.
- WILLIAM R. WEITZIS, M. S., M. D.,**
Professor of Histology.
- LEE WALLACE DEAN, M. S., M. D.,**
Professor of Physiology.
- W. E. BARLOW, B. A.,**
Demonstrator of Chemistry.
- JOHN THOMAS MCCLINTOCK, B. A., M. D.,**
Demonstrator of Anatomy.
- HENRY MAX GOETSCH, M. S.,**
Demonstrator of Chemistry.
- GERSHOM H. HILL, B. A., M. D.,**
Lecturer on Insanity.
- MARTIN J. WADE, LL. B.,**
Lecturer on Medical Jurisprudence.

COLLEGE OF HOMŒOPATHIC MEDICINE

The twenty-fifth annual course of instruction will open on Thursday, September 19, 1901, at 8 o'clock a. m., according to the programme to be announced later. In the afternoon of the same day, at 4 o'clock, the University convocation will be held, which constitutes the formal opening for all the Colleges.

The year will be divided into two semesters, each divided into two terms of nine weeks each. The commencement exercises and conferring of degrees will occur at 10 o'clock a. m. on Thursday, June 12, 1902. With this session and thereafter, the College year will be lengthened to nine months, affording opportunity for very largely improving the curriculum. By action of the Board of Regents the incoming senior class, or such of them as elect to do so, will be permitted to take their diplomas in April, 1902, the formal conferring of degrees, in such cases, being deferred until the general commencement in June. There will be no increase in fees.

The course of study extends over four years. Men and women are admitted on equal terms. The large and well equipped laboratories in the University, the hospital facilities afforded by the union of the College and hospital under one roof, and the opportunity for collateral study in any department of literature or science, furnish facilities for securing an education in medicine not to be surpassed. Furthermore, a diploma from a university of the first rank has a value that does not attach to that of any private school.

REQUIREMENTS FOR ADMISSION

1. Each applicant for admission must present to the Secretary of the Faculty of the College of Homœopathic Medicine a creditable certificate of good moral character, signed by two physicians of good standing in the state from which he comes

2. The following classes of applicants may be admitted without examination :

- a. Graduates or matriculates of reputable colleges, who present diplomas or certificates of honorable dismissal from

SENIOR YEAR—The seniors will take three hours a week in connection with the juniors, the work being the same as outlined above. One additional hour a week will be given for comparing the symptoms of the different drugs belonging to the same class.

Text-books: Farrington's *Clinical Materia Medica*, Cowperthwaite's *Materia Medica*, Allen's *Hand Book*, and Lillenthal's *Therapeutics*.

THEORY AND PRACTICE OF MEDICINE

PROFESSOR BECKER; DR. JOHNSTON.

The instruction in this department will be didactic and clinical. It will be the aim of the teacher to adhere to the most recent discoveries in pathology and its manifestations in symptomatology, which have been confirmed by abundant clinical experience. In teaching the relations of drug-pathogenesis to morbid symptoms, the established principles of homœopathic therapeutics will be consistently adhered to.

With the beginning of the year 1901-1902, the work is arranged to cover two full years, and will be progressive.

JUNIOR YEAR—Infectious diseases and fevers are taken up, in the second semester, with particular attention to differential diagnosis. One hour a week, for two terms. Dr. JOHNSTON.

Diseases of the digestive tract, including the abdominal glands, and parasitic diseases of the intestinal canal. Next the diseases of the ductless glands, of the muscles and joints, of the skin, and diseases common to man and animals, will be studied. The physical and differential diagnosis of these conditions will constitute an important feature of instruction, and will be supplemented by clinical demonstration as far as practicable. Three hours a week are devoted to class-room exercises, and two to clinical instruction, throughout the year. Professor BECKER.

SENIOR YEAR—During the first semester the diseases of the urinary organs will be thoroughly studied. One hour a week. Dr. JOHNSTON.

During the second semester diseases of the circulatory apparatus will be taken up, particular attention being given to physical diagnosis, comparison of normal and abnormal states being very completely presented. Dr. JOHNSTON.

The study of the diseases of the brain, the spinal cord, and their membranes, mental diseases, and the functional nervous diseases and reflexes will be systematically pursued; also vasomotor and trophic diseases. Three hours a week throughout the year. Professor BECKER.

Text-Books: Arndt's *Practice*, Goodno's *Practice*, Raue's *Special Pathology and Therapeutic Hints*, Lilienthal's *Therapeutics*, Hale *On the Heart*, Mitchel's *Renal Therapeutics*, Talcot's *Mental and Nervous Diseases*, Loomis's *Physical Diagnosis*, Kippax's *Diseases of the Skin*, Taylor's *Skin Diseases*.

For Reference: Ander's *System of Medicine*, Osler's *Theory and Practice of Medicine*.

In addition to the class room instruction, two hours a week will be devoted to clinical work, at which the members of the senior class will be called upon to diagnosticate cases and prescribe the indicated homœopathic remedy. The hospital and the clinics furnish an abundant supply of material for this purpose. Attendance on all clinics is required of the junior and senior classes. Students of other classes are expected to attend when other work does not interfere.

PÆDOLOGY

DR. JOHNSTON.

JUNIOR YEAR—During the first semester one hour a week is given to the study of the diseases peculiar to children. The lectures are supplemented by quizzes, recitations, and demonstrations in the general clinic. Especial attention is given to foods, feeding, and disorders of nutrition.

Text-Books: Raue, and Tooker.

SURGERY AND SURGICAL GYNÆCOLOGY

PROFESSOR GILCHRIST; DR. PECK; DR. JOHNSON.

FRESHMAN YEAR—*Minor Surgery*, including care of instruments, their selection and uses, and minor surgical procedures, such as dressing wounds, suturing, catheterization, etc. One hour a week, first term, first semester. Bandaging, preparation of splints, and other improvised appliances. One hour a week for the second term in the first semester. DR. PECK.

Clinics are to be attended when possible.

Text-Book : Martin's *Minor Surgery*.

SOPHOMORE YEAR—*Surgical Anesthesia*, including a description of the agents employed, tests for purity, methods of administration, and treatment of accidents. One hour a week, first term, first semester. Dr. JOHNSON.

Surgical Emergencies, treating of Acute Surgery in all its forms, such as hemorrhage, shock, wounds, fractures, dislocations, and foreign bodies. Two hours a week throughout the year. Professor GILCHRIST.

Attendance on general surgical clinic is obligatory.

Text-Books : Hamilton's *Fractures and Dislocations* (or Stimson); Gilchrist's *Syllabus*.

JUNIOR YEAR—*Aseptic Technique*, considering all questions relating to securing the most perfect asepsis, according to modern teaching and practice. One hour a week, first term, first semester. Dr. PECK.

Surgical Emergencies, commenced in the previous year, will be concluded. Two hours a week throughout the year. Professor GILCHRIST.

Surgical Pathology will be commenced in this year, considering the causes, symptomatology, special pathology, differential diagnosis, and treatment of conditions usually referred to the surgical practitioner. Two hours a week throughout the year. Professor GILCHRIST.

Text-Books : Gilchrist's *Elements of Surgical Pathology*, *American Text-Book*, or any modern work on Surgery.

SENIOR YEAR—*Surgical Pathology* will be concluded. Two hours a week throughout the year. Professor GILCHRIST.

Surgical Gynecology, in which the surgical diseases of women will be systematically taught, supplemented by clinical demonstration. One hour a week throughout the year and one hour weekly in the clinic. Professor GILCHRIST.

Text-Books : Wood's, Southwick's, and at least one other modern work.

Operative Surgery, showing the general principles of surgical operations, with legal, personal, social, and professional obligations of the surgeon. The commoner operations are made upon the cadaver by the student. One hour a week during the first semester. Professor GILCHRIST.

Venereal Contagion, with final examination, will be taught in two or more terms as may be found necessary. One hour a week. Dr. PECK.

Text-Book : White and Martin's *Genito-Urinary Diseases*, Doughtey or Carlton on the same. For reference the following works are suggested : Bryant's *Operative Surgery* ; Marcy on *Hernia* ; Wyeth's *Text-Book*. *International Text Book*.

OBSTETRICS AND MEDICAL GYNÆCOLOGY

PROFESSOR COGSWELL; DR. BYWATER.

JUNIOR YEAR—In *Obstetrics* proper the study is commenced in this year, the usual didactic method being followed, with frequent quizzes and recitations, supplemented by demonstrations with models, wet and dry preparations, and a liberal use of projections by means of the stereopticon. The anatomy of the pelvis, ovulation, menstruation, and generation will be thoroughly studied, giving the practical preference over that which is more theoretical. One hour a week throughout the year. Professor COGSWELL.

Text-Books : Guernsey, Leavett, Lusk, and Garrigues.

SENIOR YEAR—In *Obstetrics* the scheme is designed to carry the student through gestation and normal labor, the use of instruments, and the complications that may arise, dystocia, and all forms of abnormal gestation and labor. The manikin, stereopticon, models, and wet and dry preparations will be utilized to the fullest extent. Clinical material will be used as far as possible. One hour a week throughout the year. Professor COGSWELL.

Text-Books as in the preceding year. To these may be added Grandin and Jarmen's *Obstetric Surgery* ; Davis's *Obstetric Nursing*.

JUNIOR YEAR—*Medical Gynæcology* is commenced in this year. The anatomy and physiology of the sexual apparatus and function, and methods of diagnosis and examination are systematically taught. Particular attention is given to the more theoretical side of the subject. One hour a week throughout the year. Dr. BYWATER.

SENIOR YEAR—*Gynæcology* is continued, giving attention to the diseases of women not falling to the surgical practitioner,

and considered in a practical manner. Clinical demonstration will be given. One hour a week throughout the year. Dr. BYWATER.

DEPARTMENT OF OPHTHALMOLOGY, OTOTOLOGY,
AND PHYSICAL DIAGNOSIS AND DISEASES
OF RESPIRATORY TRACT.

PROFESSOR NEWBERRY; DR. BYWATER.

OPHTHALMOLOGY.

SENIORS AND JUNIORS—Didactic lectures and recitations one hour weekly during year. Professor NEWBERRY.

SENIORS, JUNIORS, AND SOPHOMORES—Clinics two hours each week during year. Students are assigned cases for examination and treatment at each clinic. Professor NEWBERRY.

OTOLOGY

SENIORS AND JUNIORS—Lectures and recitations one hour each week during first two terms of year. Professor NEWBERRY.

Clinics Required—Attendance upon clinics in connection with the general eye, ear, and throat clinic, two hours each week. Professor NEWBERRY.

RHINOLOGY AND LARYNGOLOGY

JUNIORS AND SENIORS—Lectures during last two terms of year. Professor NEWBERRY.

SENIORS—Subclinic one hour each week during year. Dr. BYWATER.

PHYSICAL DIAGNOSIS OF THE RESPIRATORY TRACT

SOPHOMORES AND JUNIORS—Lectures and recitations upon general topography of chest, sounds heard in health and disease, etc. One hour each week during first term of first semester. Professor NEWBERRY.

SENIORS—Subclinics in connection with nose and throat subclinic, practical application of late methods in diagnosis of diseases of the lungs, bronchial tubes, and pleura. One hour each week during year. Dr. BYWATER.

DISEASES OF THE LOWER RESPIRATORY TRACT

SOPHOMORES AND JUNIORS—Lectures and recitations upon diseases of lungs, bronchial tubes, etc. One hour each week

during last term of first semester and last semester. Professor NEWBERRY.

USE OF OPHTHALMOSCOPE, LARYNGOSCOPE, ETC.

SENIORS—Practical instruction in the use of instruments used in diagnosis of diseases of eye, ear, nose, and throat will be given at stated periods throughout the year to small divisions of senior class. Dr. BYWATER.

Text-Books: *Eye*, Norton, Buffum, Noyes; *Ear*, Winslow, Houghton, and Dench; *Nose and Throat*, Ivins, Quay, and Bishop; *Physical Diagnosis*, Loomis, Somers; *Diseases of Lower Respiratory Tract*, Dickinson, Goodno, Osler.

CLINICS

The clinics of this College are open to students of all the classes, but attendance is not obligatory in the freshman year. All the clinics are full; in some of them the capacity of the Hospital has been severely taxed. The general arrangement and clinical system are as follows: The Senior Interne at the commencement of the term details two students from the senior class as clinical assistants. One of these retires after one week's service, one after two weeks. One student a week is detailed thereafter, so that each senior student has two consecutive weeks of clinical work. The duties are to assist at all clinics and to attend to all dressings in the Hospital, under the supervision of the Senior Interne. This gives unusual facilities for practical instruction. In the medical, eye and ear clinics each member of the senior class will be given repeated opportunities for examination of patients, and will be required to diagnose the disease and suggest method of treatment. The clinics are largely patronized, the number of cases and the variety being fully equal to the college clinics elsewhere. The clinics are held as follows:

Mondays: Gynecological,	Professor Gilchrist
Tuesday: Eye, Ear, Nose, and Throat,	Professor Newberry
Wednesday: Medical,	Professor Becker
Wednesday: Physical Diagnosis,	Dr. Bywater
Thursday: Therapeutic,	Professor Royal
Friday: Diseases of Women,	Professor Cogswell
Saturday: General Surgery,	Professor Gilchrist

SUBCLINICS—The subclinics are held two or more times a week, sections of the senior class being admitted. Opportunity is afforded all to make examinations in gynecological cases, and in the use of various instruments of precision for purposes of diagnosis.

Medical and surgical treatment and nursing are free for patients entering the general clinic. Board in the hospital is furnished for \$7.00 a week.

Correspondence with reference to admission to the clinics or hospital should be had with the professor having charge of the particular clinic, or with the Director of the Hospital. Arrangements can be made for the reception of a limited number of obstetrical cases, only between the 15th of September and the 15th of May.

DISPENSARY—In connection with the clinics a dispensary has been opened, where the clinical assistants, under the direction of the faculty, prescribe for and visit out-patients, as well as attend such cases of obstetrics as apply. The dispensary is growing in patronage and influence, and has become a highly important and profitable portion of the work, affording at once material for the clinics and practical instruction to the attendant.

SCHOOL FOR NURSES

A Training School for Nurses has been established by the Board of Regents, the complete course covering three years. The first year is devoted to preliminary studies fitting the pupil for the active work, that is, as nurses in the Hospital. Candidates for admission to the Training School must not be under twenty nor over thirty-five years of age, must have a common school education, and must make a written application to the Superintendent on forms prepared for the purpose and furnished on application. No other examination is required. If admitted, their first month will be probationary, and if the work has been satisfactory they will be entered upon the roll as "Freshman Nurses," and receive \$5.00 a month for personal expenses, together with board, lodging, and laundry. Vacations are given, during the year, at least one month out of twelve, with additional vacation at the discretion of the Superintendent. On admission the pupil will be required to agree in writing, over her signature, to observe the rules and regulations of the Hospital. The instruction during this year is

COLLEGE OF HOMŒOPATHIC MEDICINE 341

largely didactic in a carefully arranged course of lectures. Examination for promotion to the junior year will be held in May. During the junior or second year, in addition to their practical work, the nurses will have one recitation each week, and in the third year special topics for essays will be arranged. During the second year the nurses will receive \$8 a month for personal expenses, with an increase to \$10 for the third year. Those who complete the three years' course will receive a suitable certificate signed by the President of the University and by the Secretary of the Board of Regents. The graduating exercises occur in connection with those of the University. For further information address the Superintendent, Homœopathic Hospital of the University.

REQUIREMENTS FOR GRADUATION

1. The candidate must be twenty-one years of age.
2. Moral character must be known to be unexceptionable.
3. The time of study must include attendance upon at least four full courses of lectures, the last of which must be taken in this institution. The time occupied by each of the four courses of lectures shall be not less than twenty-six weeks, and no two of the four courses shall be within the same year.
4. The deportment during the term must have been unexceptionable.
5. Attendance upon all lectures, clinics, and other instruction in the course must have been in accordance with the requirements of the College.

In case of failure to pass any of the examinations the student may be re-examined at the opening of the next session. If he fail in this second examination he will be allowed to present himself for re-examination only after attendance upon another course of lectures.

Students of the senior class who are candidates for the degree of Doctor of Medicine must, before May first, present to the Secretary of the faculty a certificate of legal age and of good moral character, also the receipts from the Secretary of the Board of Regents showing that all fees have been paid.

BOARD AND ACCOMMODATIONS

Good board can be obtained at from \$2 to \$4 a week. By associating in clubs, students may supply themselves with good accommodations at a material reduction from the customary prices.

Students will be furnished with all necessary information concerning rooms and boarding by applying to the Y. M. C. A. Information Bureau.

HOMŒOPATHIC ALUMNI ASSOCIATION

The Alumni Association held its eleventh annual meeting at the College Building, March 28, 1899, at which time the following officers were elected :

President—E. J. LAMBERT, Ottumwa.

First Vice-President—CLARA M. HAZARD, Iowa City.

Second Vice-President—G. A. YOUNG, Sioux City.

Secretary—P. G. EILERS, Monticello.

Treasurer—W. L. BYWATER, Iowa City.

Executive Committee—PRESIDENT, SECRETARY, and TREASURER.

Alumni are urged to send their names to the Secretary to be enrolled as members. A small admission fee is required, the funds so procured to be devoted to the Hospital according to a vote taken at the last meeting. Alumni are requested to keep the Secretary informed of change of address.

Any further information may be obtained by addressing the President of the University, or the Secretary of the Homœopathic Medical Faculty, at Iowa City, Iowa, or the Dean, at Des Moines, Iowa.



College of Dentistry



COLLEGE OF DENTISTRY

FACULTY, INSTRUCTORS AND OFFICERS

- GEORGE E. MACLEAN, Ph. D., LL. D.,**
President of the University.
- FRANK THOMAS BREENE, M. D., D. D. S.,**
Professor of Operative Dentistry and Therapeutics, and Superintendent of Operative Clinic.
- WILLIAM S. HOSFORD, B. A., D. D. S.,**
Professor of Prosthetic Dentistry, Crown and Bridge Work, Superintendent of Prosthetic Clinic, and Dean of the Faculty.
- WILLIAM HARPER DEFORD, M. A., M. D., D. D. S.,**
Professor of Oral Pathology and Hygiene.
- WILLIAM DRUMMOND MIDDLETON, M. A., M. D.,**
Professor of Surgery and Clinical Surgery.
- ELBERT WILLIAM ROCKWOOD, B. S., M. D.,**
Professor of Chemistry and Metallurgy.
- WALTER LAWRENCE BIERRING, M. D.,**
Professor of Pathology and Bacteriology.
- CHARLES SUMNER CHASE, M. A., M. D.,**
Professor of Materia Medica and Therapeutics.
- JOHN WALTER HARRIMAN, M. D.,**
Professor of Anatomy.
- WILLIAM ROBERT WHITEIS, M. S., M. D.,**
Professor of Histology.
- LEE WALLACE DEAN, M. S., M. D.,**
Professor of Physiology.
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- CHARLES CLEVELAND NUTTING, M. A.,**
Lecturer on Comparative Odontology.
- JUDGE EMLIN McCLAIN, M. A., LL. D.,**
Lecturer on Dental Jurisprudence.
- E. A. ROGERS, D. D. S.,**
Lecturer on Dental Anatomy and Regional Anatomy, and Clinical Demonstrator.
- WILLIAM J. BRADY, D. D. S.,**
Lecturer on Orthodontia and Demonstrator of Dental Technology.

CHARLES B. LEWIS, D. D. S., M. D.,
Clinical Demonstrator.
FRANK B. JAMES, D. D. S.,
Demonstrator of Dental Technology.
WILLIAM EDWARD BARLOW, M. A.,
Demonstrator of Chemistry.
H. M. GOETSCH, B. S., M. S.,
Demonstrator of Chemistry.
JOHN THOMAS MCCLINTOCK, B. A., M. D.,
Demonstrator of Anatomy.

A. W. STARBUCK, D. D. S.,
Assistant Clinical Demonstrator.
O. E. MCCARTNEY, D. D. S.,
Assistant Clinical Demonstrator.

E. A. SPRAKER,
Custodian.

HELEN BASCHNAGEL,
Clerk.

COLLEGE OF DENTISTRY

Instruction in this College is given throughout the academic year by lectures, recitations, clinical teaching, and practical exercises, uniformly distributed. The course of instruction is progressive and extends over three years of nine months each. Some of the studies of the first and second years are pursued in connection with the classes in the College of Medicine, the student receiving instruction by the same professors, at the same time and place with the medical students, and at the end of the year taking with them the examination.

It is the object of the faculty to present a complete course of instruction in theory and practice of Dentistry, and for this purpose well-appointed laboratories and infirmaries are provided, and such arrangements made as insure an ample supply of patients. Clinical instruction is given by the professors and other instructors, and under the direction of demonstrators patients are assigned to the students, insuring to all opportunity of operating at the chair and of becoming by actual practice familiar with all the operations demanded of the dentist. The infirmaries remain open, and clinical instructors and demonstrators are in attendance daily throughout the college year, offering to students unsurpassed facilities for acquiring practical knowledge and manipulative dexterity.

REQUIREMENTS FOR ADMISSION

The applicant must present to the faculty satisfactory evidence of good moral character, and must pass a preliminary examination, or present a diploma or a certificate of graduation from a college, academy, or high school, or a first-class teacher's certificate covering the branches included in Section 2 as adopted by the National Association of Dental Faculties. Students of either sex are admitted on equal terms and are afforded the same facilities for acquiring a thorough dental education.

Extract from Code of Rules of the National Association of Dental College Faculties, adopted August, 1899:

SEC. 2. The following preliminary examination shall be required of students seeking admission to colleges recommended by this Association. The minimum preliminary educational requirements of colleges of this Association for the session of 1900-1901 shall be a certificate of entrance into the second year of a high school, or its equivalent.

b. The minimum preliminary educational requirement of colleges of this Association, beginning with the session of 1902-1903, shall be a certificate of entrance into the third year of a high school, or its equivalent; the preliminary examination to be placed in the hands of the State Superintendent of Public Instruction.

The preliminary examination may be placed in the hands of any state or county superintendent of public instruction. The candidate must make a general average of at least seventy-five per cent in this examination; but he may be admitted with one condition, which, however, must be made up during his freshman year.

Students who enter with conditions must complete their preparation in either one of the following ways:

(a). Pass the regular entrance examinations in the subject in which they are conditioned, to be held one year from September, 1901.

(b). Present certificates on forms provided by the University and signed by tutors who have been previously approved.

It is urged that any one who expects to enter the College of Dentistry next September send all necessary credentials to the University Examiner as early in the summer as possible, and certainly before September 1. If the credentials are satisfactory a card of admission will be sent to the applicant at once. Upon arriving in the city he should present this card to the Dean for his signature.

ENTRANCE EXAMINATIONS

Any person who expects to enter the College of Dentistry in September, 1901, should be careful to learn before the opening of the University just what entrance examinations he must take. He can learn this by addressing the President of the University, the Dean of the College, or the University Examiner.

It is necessary that each applicant who is to be examined arrive in the city early enough to be present *at his first examination as indicated in the programme given below*. He should present himself at once at the office of the University Examiner, who will give all necessary directions.

PROGRAMME OF ENTRANCE EXAMINATIONS

MONDAY, SEPTEMBER 16, TO WEDNESDAY, SEPTEMBER 18, 1901.

The applicant who is to be examined in one or another of these subjects is expected to present himself at the hour designated for the examination in that subject.

Latin,	3 to 2 credits, Monday,	3:30 p. m.
German,	3 to 6 credits,	3:30 p. m.
Algebra,	4½ credits, Tuesday,	8:00 a. m.
Plane and Solid Geometry,	4½ credits, Tuesday,	10:00 a. m.
General History,	3 credits, Tuesday,	1:00 p. m.
English History or American History,	1½ credits, Tuesday,	2:30 p. m.
Civics or Economics, English and English Grammar,	1½ credits, Tuesday,	3:30 p. m.
Literature,	3 credits, Tuesday,	4:30 p. m.
Physics,	3 credits, Wednesday,	8:00 a. m.
Botany,	3 credits, Wednesday,	9:30 a. m.
Physical Geography,	1½ credits, Wednesday,	11:00 a. m.
Physiology,	1½ credits, Wednesday,	1:30 p. m.
Arithmetic,	1½ credits, Wednesday,	2:30 p. m.
		3:30 p. m.

ADMISSION TO ADVANCED STANDING

Students who present certificates of having taken courses in other recognized schools which cover subjects required in this College will be accredited with such studies if satisfactory to the professors in the respective departments.

ADMISSION OF GRADUATES OF MEDICINE--A diploma from a reputable medical college may entitle the holder to enter the second or junior grade in colleges of the Association subject to other rules governing admission to that grade.

ADMISSION OF GRADUATES OF PHARMACY AND VETERINARY MEDICINE--Students qualified according to the above heading may matriculate as juniors subject to other rules governing admission to this grade.

ADMISSION OF UNDERGRADUATES OF MEDICINE--Undergraduates of reputable medical colleges who have regularly

completed one full scholastic year, having attended at least seventy-five per cent of a five months' term, and passed a satisfactory examination in the studies of the freshman year, may be admitted to the junior class, subject to other rules governing admission to that grade.

SCHEDULE OF STUDIES

FIRST OR FRESHMAN YEAR—Completed the first year: Chemistry, including laboratory work; Materia Medica; Histology, including laboratory work; Comparative Anatomy with Dissection; Dental Anatomy with Technic; Tooth Carving Technic; and Dental Technology.

Subjects taken the first year and continued through the second year: Anatomy; Physiology; Dental Technology; lectures and laboratory work; and Operative Technic.

SECOND OR JUNIOR YEAR—Subjects completed the second year: Anatomy with Dissection; Physiology; Metallurgy, including laboratory work; Therapeutics; Dental Technology; Special Histology, and laboratory work.

Subjects taken the second and continued through the third year: Surgery; General Pathology; Therapeutics; Orthodontia Technic; Operative Technic; Operative Dentistry; Prosthetic Dentistry; and Special Pathology.

THIRD OR SENIOR YEAR—Subjects completed the third year: Oral Surgery; Pathology; Regional Anatomy; Special Histology; Clinical Dentistry; Therapeutics; Dental Art; Special Therapeutics; Practical Bacteriology; Operative Dentistry; Prosthetic Dentistry; Dental Pathology; Hygiene.

All students of the first and second years will be required to pass an examination on the studies pursued in their respective courses before leaving the University at the close of each term. No student who has failed in two of the studies of his course will pass to advanced standing unless these studies are made up before the holiday vacation. No certificates are given to any who fail in more than two branches, except a time certificate stating the actual time of attendance.

Examination in conditioned studies will take place the following session, namely, the fourth week in September and the second week in January.

COURSE OF LECTURES AND LABORATORY WORK

OPERATIVE DENTISTRY AND THERAPEUTICS

To arrest decay and prevent the destruction of human teeth is the ideal work of operative dentistry. To know how to fill teeth well and lastingly is the ambitious desire of every intelligent student of dentistry. In the lectures delivered on this subject the student will be made acquainted with all the useful materials and methods of filling teeth, the use of instruments, and the various manipulations required in practice at the operating chair. All matters discussed will be fully illustrated and demonstrated by numerous clinics, which will constitute an important feature of the dental instruction. The student is expected to supply himself with such instruments as will enable him to perform all the usual operations of dentistry under the supervision of the demonstrators. The application of remedies to diseased conditions is taught practically every day upon the patients in the operative clinic.

CLINICAL DENTISTRY

In clinical dentistry thorough practical instruction is given in the details of operation, use of materials, instruments, appliances, and the application of remedial agents for the cure of diseased conditions. The students are required to take charge of patients and perform operations under the supervision of demonstrators. The large number of clinical patients presenting themselves furnishes ample opportunity for a variety of practical work.

PROSTHETIC DENTISTRY

The instruction in this subject is both didactic and practical. It is the aim to teach not only the mere mechanical processes of Dentistry, but also that combination of art with mechanism

which enables the practitioner to effect so much in restoring the symmetry of the face and the usefulness of teeth where they have been lost or impaired by accident or disease. Thorough instruction is given also in methods of restoring the dental organs with crowns of metal or porcelain, by bridges, and by the making of artificial dentures with bases of metal, rubber, celluloid, aluminum, gold, and porcelain, either alone or in combination.

ORAL PATHOLOGY

The work in Oral Pathology embraces a brief consideration of inflammation and its terminations, pathological conditions incident to first dentition; pathological conditions incident to second dentition; dental caries, sensitive dentine, hyperæmia, congestion and inflammation of the pulp, pulp modules, putrescent pulps, acute and chronic alveolar abscesses, diseases of the periodontal membrane, pericementitis, gingivitis, pyorrhœa alveolaris; the tongue and the mouth in diseases of remote parts; various tumors in and about the mouth especially, the epulic tumors, osteoma, simple cystic tumors, dentigerous cysts; diseases of the antrum, ranula, mouth breathing, alveolar necrosis, maxillary necrosis, phosphor-necrosis, epithelioma, mouth manifestations of syphilis, neuralgia, and many other pathological conditions as seen in practice.

HYGIENE

The importance of this subject cannot be overestimated when it is understood that decay of the teeth, suppuration of the pulp, alveolar dental abscess, pyorrhœa alveolaris, and perhaps other diseases with which dentists have to contend, are the direct result of unhygienic conditions in the oral cavities. The processes of fermentation, suppuration, and infection in general are considered, and full instruction given in oral, personal, and office hygiene, and in the best methods of disinfection and antisepsis, including the care of the instruments in daily use.

ORAL SURGERY

The instruction in this subject combines didactic and clinical teaching. Third year students are expected to attend the surgical clinics.

GENERAL PATHOLOGY AND BACTERIOLOGY

Pathology and Bacteriology are taught during the junior and senior years by means of lectures and laboratory work. The work in the junior year is devoted to General Pathology, comprising a study of the general pathological changes, such as circulatory disturbances, degenerations, and inflammations, that occur in human tissues. During the senior year the work consists of special pathology and bacteriology. It includes the study of forms of new growths and the disease changes occurring in special structures, especially the oral tissues and such changes as come within the sphere of dental surgery.

The bacteriological laboratory is equipped with the most improved apparatus for bacteriological investigation. The work comprises the study of the characteristics of microorganisms of the buccal cavity and their relation to dental caries and other disease processes. The slides prepared become the property of the student.

HISTOLOGY AND EMBRYOLOGY

The Histological Laboratory occupies the east half of the first floor of the Medical Building. There are a large laboratory for class work and three small rooms for special work. The department is furnished with fifty-five compound microscopes and a number of dissecting microscopes. Among the other equipment may be mentioned several microtomes for brain sections, celloidin work, and paraffin work; incubators and injection apparatus; also the reagents and appliances usually found in a well-furnished histological and embryological laboratory.

The didactic work of the freshman year will be supplemented by laboratory work, beginning with the structure and manipulation of the microscope and action of stains. Cell structure, as seen in the simpler forms of plant and animal cells, is first studied, then the more highly differentiated animal cells. After this, in the order named, the following structures will be studied: The histology of the animal tissues, digestive tract, genito-urinary tract, respiratory tract, histology of the skin and nervous system. The slides prepared become the personal property of the student.

During the junior year the work is continued in the form of special dental histology, which is presented by means of didac-

tic lectures and laboratory work. In the laboratory each student prepares and studies a collection of slides pertaining to the histology of all the dental tissues and softer structures of the buccal cavity, including a complete series showing the development of the teeth, the slides becoming the property of the student.

CHEMISTRY

The work in Chemistry is carried on during two years. It consists of lectures and laboratory work. In the freshman year the lectures treat of the general principles of the science with special attention to their application to dental operations and the needs of the dental practitioner. The laboratory work is chiefly in qualitative analysis with a view of familiarizing the student with the action of reagents, with chemical manipulations, and with the most important properties of the metals and their compounds.

The lectures of the junior year will be upon metallurgy, and the laboratory work will be such as shall more fully illustrate the properties of the metals. The methods of refining gold, silver, and platinum will be given, and also those for making and testing alloys and amalgams.

MATERIA MEDICA

FRESHMAN YEAR—The freshman class receives two lectures each week upon the preliminary matter leading later to the detailed consideration of drugs proper. The preliminary topics include definitions, classification, dosage, routes, and modes of administration of remedies, prescription writing, including incompatibilities, metric and common systems of weights and measures, etc. The second division of the subject takes up the discussion of drugs in detail, following a natural and helpful grouping based upon the dominant action of a leading drug in each group to which such drugs may be assigned. Also the antagonistic and synergistic actions of the drugs are considered in their appropriate places and order. Quizzes, recitations, and tests are given frequently to aid the student's memory. At the close of the session a review will be given and final examination.

JUNIOR YEAR—The junior class will be given lectures on general therapeutics, special stress being laid upon those topics

that appertain chiefly to dentistry, such as anæsthetics, general and local; coagulants, mineral and vegetable; pain obtunders, sedatives, narcotics, etc. Also such drugs as are comprised in the list of antiseptics, disinfectants, germicides, deodorants, epispastics, escharotics, etc., are specially considered. A few of the more prominent and common dental affections, such as abscess of the antrum, alveolar abscesses, pyorrhœa alveolaris, etc., will be briefly discussed from their therapeutic standpoint chiefly. At the close of the year an examination will be given upon this subject.

ANATOMY

This subject is taught by means of lectures, recitations, and dissections. The course extends through the freshman and junior years. Lectures are illustrated by means of moist specimens, dissections, models, and blackboard figures. During the first year the course includes osteology, syndesmology, and the alimentary canal and associated structures. The second year is devoted to the study of thoracic viscera, genito-urinary organs, brain and cord, and special senses.

PHYSIOLOGY

The Department of Physiology occupies a suite of rooms on the first floor of the Medical Building, including a laboratory of experimental physiology and a room for animals. The latter is so arranged that frogs, turtles, rabbits, etc., can be kept throughout the whole year under suitable conditions. The room is abundantly supplied with separate compartments so that animals which are being experimented upon can be kept by themselves and observed.

The lecture rooms for Physiology are on the second and third floors of the Medical Building. The physiological laboratory is abundantly equipped with a full supply of apparatus and instruments, chemicals, etc., for experimental purposes. The outfit includes various complicated pieces of physiological apparatus, as artificial respiratory machines, myographs, chronographs, various kinds of electrical batteries, galvanometers, ergographs, kymographs, stethometers, sphygmographs, hemometers, hemoglobinometers, and cardiographs.

In addition the laboratory is well equipped with various artificial eyes, retinoscopes, ophthalmoscopes, models of the

eye and ear, and instruments for determining the acuity of vision and hearing.

The course in Physiology is graded in the first and second years.

In the first year the students hear the lectures and attend quizzes. The lectures are abundantly illustrated by charts, experiments upon the living animal, and upon the human subject. These lectures cover, in so far as possible, the subject of biology and the proximate analysis of the human body, the fundamental laws governing life, a study of the fundamental physiological processes in the body, and a study of the nutritive media, the lymph, chyle, and blood, the elementary functions of the nervous system, the physiology of reproduction, secretion, excretion, circulation, respiration, and the physiology of the muscles and the nerves.

In the second year the work is made as practical as possible and includes lectures upon the digestive and nutritive processes in the body, the processes of assimilation, the physiology of the nervous system, of the eye, the ear, the nose, the throat, and the larynx.

ADVANCED PRACTICAL PHYSIOLOGY—Elective. This course is open to students who have completed courses as stated above. The student may select any subject in Physiology and do advanced work. He will be supplied with animals and apparatus for this work. Nine hours a week during third year.

ORTHODONTIA

The increasing importance of this branch has led to the establishment of a very thorough and complete course, in which instruction is given by lectures (illustrated by the stereopticon) and by practical work in the infirmary, which furnishes an abundance of cases. These are cared for by the individual students under the direct supervision of the lecturer on the subject.

REGIONAL ANATOMY

The instruction in regional anatomy is supplementary to the lectures on general anatomy, and includes a careful description of the bones, muscles, blood vessels, and nerves of the head and face, especially such as are intimately associated with the physiology and pathology of the dental organs. The lec-

tures are illustrated by maps, charts, and models, and by several well prepared natural specimens of the head, jaws, teeth, and nerves *in situ*.

COMPARATIVE ODONTOGRAPHY

This course is of unusual practical value. The dental organs and their practical use, comprised in the various orders or families of the animal kingdom, are illustrated by natural specimens, lantern exhibitions, and dissection of the lower animals.

DISSECTION

Early in the term students make application to the demonstrator of anatomy for places at the dissecting table. Each student is required to dissect at least one part in both freshman and junior year. No charge is made for material.

DENTAL ANATOMY

This subject is taught by lectures and recitations, supplemented by laboratory technic in the second semester. In the study of Dental Anatomy, human and comparative, the definition, terminology, notation, form and arrangement of the teeth will be fully considered; also macroscopic and microscopic characteristics of sections, including the study of the relation of enamel to dentine and of the pulp canal.

PORCELAIN WORK

The use of porcelain in the various applications to the practice of dentistry is taught, including crowns, bridges, artificial dentures, inlays, etc. Also the use of the various furnaces is demonstrated.

OPERATIVE TECHNIC

This work is the most important preparation for practical clinical work that has yet been offered. The course includes the carving of a number of teeth from bone, in which are inserted fillings of all materials, with close study of the proper preparation of cavities of all classes, and the instruments used at each step of the work. All materials for this work, excepting gold, are furnished by the College.

PROSTHETIC TECHNIC

The course in Prosthetic Technic has been much enlarged and forms a most excellent training for practical prosthetic work. The course includes the making of partial and full dentures on vulcanite base, with repair of the same, partial and full dentures on metal base, dies and counter dies, and swaging of plates by the most approved methods, together with all common forms of crown and bridge work. The materials for this work are furnished *free of charge* to the student.

DENTAL MUSEUM AND LIBRARY

Members of the dental profession, dental students, and all persons interested, are invited to contribute to the museum such specimens of malformation, normal or diseased conditions as will serve for illustration of dental teaching; also to the library any books, pamphlets, journals, or other reading matter pertaining to dental subjects. Such contributions will be duly labeled with the donor's name and carefully preserved.

LABORATORIES AND CLINIC ROOMS

The didactic work is supplemented by practical teaching in the laboratory and clinic rooms, with an abundance of patients (7,049 last session). The clinic rooms are equipped fully and completely with Wilkerson and Columbia chairs, cabinets, and fountain cuspidors, and all necessary apparatus for the purpose, such as lathes, furnaces for porcelain work, rolling mills, vulcanizers, tables, microscopes, etc. Students are required to supply only the lighter and more portable instruments, the list of which will be furnished on application.

REQUIREMENTS FOR GRADUATION FOR SESSION
OF 1901-1902

The candidate for graduation must be of legal age and of good moral character; must present to the faculty a satisfactory case of artificial dentistry; also the required clinical record of practical operations on the natural teeth; must sustain a satisfactory examination in the branches taught, and must prove his fitness for the practice of dentistry.

The time of study must include attendance on three courses of lectures, the last of which must be at this College.

The department during the course must have been unexceptionable, and attendance upon all lectures, clinics, and other instruction in the course must have been in accord with the requirements of the College.

Members of the junior class must be examined finally in anatomy, physiology, metallurgy, therapeutics, and special histology.

Members of the senior class must notify the Dean of the Faculty in writing during the second week of April of their intention of becoming applicants for the degree of Doctor of Dental Surgery, at the same time presenting a certificate from the Secretary of having paid all fees, with a certificate of legal age and good moral character.

Attendance on any course of lectures in other reputable dental colleges having similar requirements will be accepted as equivalent to a corresponding course in this College. Graduates of medical colleges will be required to attend two full years of instruction in practical dentistry in this College, including the course of lectures, before applying for graduation.

Having complied with the requirements of this College, the faculty will recommend the candidate to the Board of Regents as entitled to receive the degree of Doctor of Dental Surgery.

TUITION

The fee for tuition is \$75 for each year, payable \$50 on date of registration and \$25 on or before January 8. There are no extra fees whatever, but a deposit of \$3 must be made to cover breakage and loss before beginning work in the chemical laboratory.

The above statement of the fees is now in effect, and will be understood to apply to all students in the College, entirely irrespective of the date of matriculation.

PRACTITIONERS' COURSE

This course is planned for the convenience and benefit of practitioners. It will be optional with those entering the course as to what studies they will pursue, and what methods in practical work they may take up. The curriculum will be

arranged more especially to give a thorough course in pulp and abscess treatment and other pathological conditions of the oral cavity. In addition to this, detailed instruction will be given in bridge and crown work, continuous gum dentures, porcelain fillings, and in the methods of working metals by all the different operations which the practitioner is called upon to perform.

REQUIREMENTS FOR ADMISSION TO PRACTITIONERS' COURSE

Anyone in reputable practice may enter this course. Those attending the full course of two months will be given a Practitioner's Certificate at the end of the course. Graduates of this College will be admitted on the payment of the matriculation fee only. Graduates of other reputable dental schools will be admitted on payment of the matriculation fee and \$10.

A full corps of demonstrators in all subjects has been appointed to attend to the duties pertaining thereto. The service of several additional clinical instructors will be obtained during the session, each a specialist.

FEEs FOR PRACTITIONERS' COURSE

Matriculation fee.....	\$ 5 00
Tickets, including certificates.....	25 00
Laboratory fee.....	6 00
	<hr/>
	\$36 00

DENTAL ASSISTANTS' COURSE

A training school for dental assistants has been authorized by the Board of Regents. The course will extend through one year of nine months, beginning and ending with the regular dental year. The fee for tuition is \$75 for the course, of which \$50 is payable on date of Registration, and the balance on or before January 8. Candidates for admission to this course must possess a common school education, and must present two letters of recommendation as to their capabilities, qualifications, and moral character. No other examination for admission will be required. Those completing the course will receive a suitable certificate properly signed, and attested by the seal of the University. This course will be both didactic and

practical, thorough instruction being given in operative and prosthetic technic, therapeutics, pathology, and dental anatomy; there are also special lectures and work relative to the duties of an assistant both at the operating chair and in the laboratory.

Credits obtained in this course will be allowed to those desiring to attend and complete the regular dental course, providing the requirements are fulfilled as provided for the regular dental course.

COMBINED SCIENTIFIC, OR CLASSICAL, OR PHILOSOPHICAL A AND DENTAL COURSE

Arrangements have been made with the faculty of the College of Liberal Arts by which it will be possible for a student to complete the course in science and the course in dentistry in six years, thereby attaining the degrees of B. S. and D. D. S.

A student electing the Classical or Philosophical A course in the College of Liberal Arts, may obtain the degree of B. A. or Ph. B. and D. D. S. in the same length of time by electing the required science of the scientific course during the years of his undergraduate course in the College of Liberal Arts and taking the course in dentistry as prescribed in the following combined course.

COMBINED COURSE LEADING TO THE DEGREES OF B. S. AND D. D. S.

FIRST YEAR	SECOND YEAR
German—*5	German—3
Mathematics—5	English—2
Drawing—3	Physics—5
English—2	Zoology—5
Military Drill—3	Animal Physiology—2
	Military Drill—3
THIRD YEAR	FOURTH YEAR
Botany—5	Freshman Dental
Chemistry—5	French—15 hours in College of Liberal Arts
Animal Morphology, advanced—5	
Military Drill—3	
FIFTH YEAR	SIXTH YEAR
Junior Dental	Senior Dental
Elective, of 15 hours in College of Liberal Arts	

*The figures indicate the number of exercises a week. For a full statement regarding courses in College of Liberal Arts see University Calendar.

PAYMENT OF FEES

All fees must be paid promptly, when due, to the Treasurer of the Board of Regents, Lovell Swisher. Students who do not pay the fees when due will be suspended from the College until payment has been made.

TEXT-BOOKS AND BOOKS OF REFERENCE

These can be obtained at the bookstores in Iowa City. Dealers give a discount of from ten to twenty per cent. The following are recommended by the Faculty:

Operative Dentistry: American Text-book of Operative Dentistry, Ottellungui, Flagg's Plastics, Johnson's Method of Fitting Teeth.

Prosthetic Dentistry: Essig's Prosthetic Dentistry, Richardson's Mechanical Dentistry, Evan's Artificial Crown and Bridge Work; collateral reading of Harris's Principle and Practice, American system of Dentistry.

General Pathology: Green, Stengel, Zeigler, Delafield, Pruden.

Bacteriology: Abbott, Crookshank, McFarland.

Histology: Piersol, Schaefer, Stirling, Klein.

Oral Pathology and Hygiene: Greene, Garretson's Oral Surgery, Wilson on Hygiene, Marshall's Diseases of Face, Mouth, and Jaws, Barrett's Oral Surgery, Birchard's Dental Pathology.

Chemistry: General Chemistry—Wurtz, Bloxam, Witthaus; Qualitative Analysis—Thorpe, Crafts.

Materia Medica: White and Wilcox, Potter.

Therapeutics: H. C. Wood, Potter, Gorgas.

Anatomy: Gray (13th edition), Holden's Landmarks, Quain (10th edition), Holden's Osteology, McClellan's Regional Anatomy, Treve's Applied Anatomy.

Physiology: Landois and Sterling, Kirk, Stewart.

Orthodontia: Angle, Farrar, Guilford.

Dental Anatomy: Black, Broonel.

Comparative Anatomy: Howell.

Dictionaries: Harris, Dungleison, Thomas, Gould.

NOTICE

The National Association of Dental Faculties, of which this College is a member, has passed a rule whereby all students not regularly matriculated within ten days from the opening of any school will not receive credit for a full course. In case one is prevented by sickness, properly certified to by a reputable physician, from complying with the foregoing rule, the time of admission shall not be later than twenty days from the opening day.

The College of Dentistry of the State University of Iowa complies not only with the rules and conditions of the National Association of Dental Faculties, but also with those of the National Association of Dental Examiners.

Students should make their arrangements to be in attendance on the first day of the session, as the faculty cannot adjust their plans to the tardy arrival of students by wasting time on unimportant lectures at the beginning. Promptness at the beginning of the term is very essential.

Members of the profession who receive this catalogue are requested to notify the Secretary of any change in their address. They will also confer a favor by sending the names of other dentists practicing in the towns in which they reside. For further information apply to William S. Hosford, Dean of the College of Dentistry, Iowa City, Iowa.

DENTAL CLINICS

STATISTICS—FOR THE YEAR 1900-1901

OPERATIVE DEPARTMENT

No. of patients treated.....	7047
No. of fillings—gold.....	1372
No. of fillings—amalgam.....	2247
No. of fillings—cement.....	462
No. of pulp cases.....	1700
No. of cleaning cases.....	352
No. of pyorrhœa cases.....	32
No. of extraction cases.....	505

PROSTHETIC DEPARTMENT

No. of specimen sets of artificial teeth.....	312
No. of sets of artificial teeth.....	164
No. of sets of artificial teeth repaired.....	91
No. of specimen partial dentures.....	104
No. of specimen partial dentures, metal.....	104
No. of specimen full dentures, metal.....	55
No. of cleft palate appliances.....	2

ORTHODONTIA

No. of sets of teeth regulated.....	43
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CROWN AND BRIDGE WORK

No. of crowns and caps.....	772
No. of porcelain crowns.....	130
No. of pieces of bridge work.....	105
No. of specimen crowns and bridges.....	1867

PROGRAMME OF THE COLLEGE OF DENTISTRY

STATE UNIVERSITY OF IOWA, FALL AND WINTER TERMS, 1900-1901

FRESHMAN YEAR

Hour	Monday	Tuesday	Wednesd'y	Thursday	Friday	Saturday
8 to 9	Physiology 1	Prosthetic Technic 2	Physiology 1	Organic Materia Medica 1	Histology 1	Anatomy 1
9 to 10	Dental Anatomy 2	Physiology 1				Anatomy Recitation 1
10 to 11	Anatomy 1	Anatomy 1	Physiology Recitation 2	10 to 12 <i>Histolog'ly</i> Laborat'y 4	Anatomy 1	
11 to 12	Histology 2	Recitation Histology 3	Organic Materia Medica 1			
1 to 2	1 to 4 <i>Sec. II</i> <i>Prosthetic</i> <i>Laborat'y</i> 2	1 to 1 <i>Sec. I</i> <i>Prosthetic</i> <i>Laborat'y</i> 2	1 to 4 <i>Sec. II</i> <i>Prosthetic</i> <i>Laborat'y</i> 2	1 to 4 <i>Sec. I</i> <i>Prosthetic</i> <i>Laborat'y</i> 2	3:30 to 5:30 <i>Sec. II</i> <i>Histolog'ly</i> <i>Laborat'y</i> 4	
2 to 3						
3 to 4						
4 to 5			4:30 to 5:30 <i>Recitation</i> <i>Materia</i> <i>Medica 2</i>			
5 to 6						

Chemistry, Spring Term; Dissection, October; Programme of Spring Term to be announced.

JUNIOR YEAR

Hour	Monday	Tuesday	Wednesd'y	Thursday	Friday	Saturday
8 to 9	Operative Dentistry 2 Room 17	Anatomy 1	Materia Medica 3	Prosthetic Dentistry 2	Prosthetic Dentistry 2	Physiology 1
9 to 10	Operative Dentistry 2	Special Pathology 2 Room 17	Therapeu- tics 3	Physiology 1	Physiology Recitation Amphithe- atre 2	
10 to 11	Physiology 3	Special Pathology 2	Anatomy 1	Anatomy 1	Orthodon- tia 2 Room 17	
11 to 12			Anatomy Recitation 2	Therapeu- tics 1	Anatomy 1	
1 to 2	1 to 4 <i>Prosthetic</i> <i>Laborat'y</i> 2	1 to 4 <i>Prosthetic</i> <i>Laborat'y</i> 2	1 to 4 <i>Prosthetic</i> <i>Laborat'y</i> 2	1 to 4 <i>Prosthetic</i> <i>Laborat'y</i> 2		
2 to 3						
3 to 4						
4 to 5						
5 to 6						

Chemistry, Metallurgy, Pathology, and Special Histology, Spring Term. Infirmary after completion of Laboratory Courses in Prosthetic and Operative Technics.

SENIOR YEAR

Hour	Monday	Tuesday	Wednesd'y	Thursday	Friday	Saturday
8 to 9	Operative Dentistry Room 17	Special Therapeutics R'm 17	Recitation hour	Prosthetic Dentistry Room 17	Prosthetic Dentistry 2 Room 17	Recitation Pathology Room 12
9 to 10	Operative Dentistry Room 17	Special Pathology Room 17	Pathology Room 17	9 to 11 <i>Pathological Laborat'y</i> 4	Regional Anatomy Room 17	9 to 12 <i>Infirmery</i>
10 to 11	Special Lectures	Special Pathology Room 17	Recitation hour		Orthodontia Room 17	
11 to 12	Special Lectures	<i>Rec:Spec'l</i> Pathology Room 17	Recitation hour			
1 to 2						
2 to 3						
3 to 4	1 to 5 <i>Infirmery</i>	1 to 5 <i>Infirmery</i>	1 to 5 <i>Infirmery</i>	1 to 5 <i>Infirmery</i>	1 to 5 <i>Infirmery</i>	1 to 5 <i>Infirmery</i>
4 to 5						
5 to 6						

Oral Surgery to be announced. Clinical Surgery 1:30 to 4 Thursday. Special Clinicians and Lectures to be announced.

1 Medical Amphitheatre.
2 Dental Building.

3 Room 3, Medical Building.
4 Medical Building.

SPRING PROGRAMME—FRESHMAN YEAR

Hour	Monday	Tuesday	Wednesd'y	Thursday	Friday	Saturday
8 to 9	Chemistry	Anatomy	Anatomy	Chemistry	Chemistry	Chemistry
9 to 10	Anatomy					
10 to 11	Operative Technic 10 to 12	Chemical Laborat'y 9 to 12	Chemical Laborat'y 9 to 12	Chemical Laborat'y 9 to 12	Chemistry	Chemical Laborat'y 9 to 12
11 to 12						
1 to 4	<i>Sec. II</i> Prosthetic Laborat'y	<i>Sec. I</i> Prosthetic Laborat'y	<i>Sec. II</i> Prosthetic Laborat'y	<i>Sec. I</i> Prosthetic Laborat'y		

College of Pharmacy

COLLEGE OF PHARMACY

FACULTY

GEORGE EDWIN MACLEAN, PH. D., LL. D.,

President of the University.

EMIL LOUIS BOERNER, PH. G., PHAR. D.,

Professor of Pharmacy, Director of the Pharmaceutical Laboratory,
and Dean of the Faculty.

LAUNCELOT W. ANDREWS, PH. D.,

Professor of Chemistry, and Director of the Chemical Laboratory.

THOMAS H. MACBRIDE, M. A., PH. D.,

Professor of Pharmacognosy, and Director of the Microscopical
Laboratory.

CHARLES S. CHASE, M. A., M. D.,

Professor of Materia Medica.

BOHUMIL SHIMEK, C. E.,

Professor of Botany.

E. W. ROCKWOOD, B. S., M. D.,

Lecturer on Toxicology.

CARL VON ENDE, PH. D.,

Instructor in Chemistry.

WILBER JOHN TEETERS, M. S., PH. C.,

Instructor in Pharmacy.

FRANK N. BRINK, B. PH.,

Assistant in the Chemical Laboratory.

ZADA M. COOPER, PH. G.,

Assistant in the Pharmaceutical Laboratory.

COLLEGE OF PHARMACY

The College of Pharmacy of the State University of Iowa is designed to furnish pharmacists, and those desiring to engage in pharmacy, an opportunity to acquire a thorough practical education in the departments of science most intimately connected with the practice of that profession. A technical education, such as that offered by the colleges of pharmacy, and seldom if ever acquired in drug stores, is as necessary to the accomplished pharmacist as is the special training of a medical course to the physician. The day is not far distant when the pharmacist who is not provided with the evidence of skill which the college diploma furnishes, will labor under equal disadvantages with the non-graduated physician of to-day.

The experience of the past fifteen years has thoroughly demonstrated the practical nature of the courses in this College. This is shown by the readiness with which students of even one session find and hold employment in drug stores at salaries much higher than they could possibly command without the college training, and by the fact that a much larger percentage of students who have completed one year's work in this College pass the examinations before the State Board of Pharmacy than of candidates who go before the Board from drug stores, even after several years' experience.

Incidentally, therefore, the courses are well calculated to aid those who desire specially to qualify for the examinations of the State Board of Pharmacy.

It is the aim of the faculty to make the courses so practical that students will find it not only professionally but also pecuniarily profitable to spend a season or two in the College.

Sec. 2589 of the Code, relating to the registration of pharmacists, was amended by the Legislature on March 26, 1898, to read as follows:

Sec. 2589. Examination—registration. The commission, at such times and places as it may select, and in such manner as it may determine upon, shall examine all persons desiring

to engage in and conduct business as registered pharmacists, as contemplated in the preceding section, and, if found competent, the applicant's name shall be entered in the registry book of certificate holders. Graduates of pharmacy holding a diploma from the State University, or from any school or college of pharmacy requiring a course of study and laboratory work equivalent to that prescribed by the said University in its catalogue for the school year 1897-98, shall be entitled to registration as pharmacists without examination. Pharmacists thus registered have the sole right to keep and sell all medicines and poisons, except intoxicating liquors.

The seventeenth annual course of lectures will begin on Wednesday, September 18, 1901, and may close on Wednesday, April 2, 1902. There will be a vacation commencing December 20, 1901, and ending January 2, 1902.

The faculty has recommended to the Board of Regents the extension of the college year to nine months. Action will be taken at the meeting of the Board April 3, 1901. Further information may be obtained by addressing the Dean after that date.

BUILDING

This college is comfortably located in a three-story building, erected at a cost of about fifty thousand dollars, and furnishing about twenty-five thousand square feet of floor space, perhaps the largest accommodations in the way of room enjoyed by any college of pharmacy in this country. The equipment of this building is of the most modern and in keeping with the advancing stage of the science. Through liberal appropriations periodically made by the legislature and Board of Regents, the accumulated equipment of some years is being constantly enlarged, and affords excellent facilities for instruction. The lecture rooms are provided with all desirable conveniences for class demonstration, and with large tablet chairs. The laboratories are especially roomy, the chemical and pharmaceutical laboratories occupying each a floor space of 54x140 feet, divided into two large general and a number of smaller special laboratories. Two forty horse-power boilers supply the steam for all purposes, and a seven horse-power gas engine furnishes the power for drug mill, dynamo, etc.

REQUIREMENTS FOR ADMISSION

Every applicant for admission to the junior class will be required to present satisfactory evidence of having completed, in a grammar school, English, penmanship, geography, and arithmetic, or pass a satisfactory examination in these branches before the University Examiner.

Admission to the senior class will be by examination in the branches of study taught during the junior year. Students presenting evidence of having passed the junior examination in another recognized college or school of pharmacy will be admitted without examination.

For September, 1902, candidates for admission must present at least one year's work in an accredited high school or equivalent institution; for September, 1903, two years of such preparatory work will be required.

Notice is also given in this connection to the effect that the requirements for admission are to be still further extended in subsequent years.

PROGRAMME OF ENTRANCE EXAMINATIONS**WEDNESDAY, SEPTEMBER 18, 1901****Geography, 1:30 P. M.****Arithmetic, 3:30 P. M.****English and English Grammar, 4:30 P. M.****Penmanship will be judged from the manuscripts presented.**

COURSES OF INSTRUCTION

The courses of instruction embrace lectures on Pharmacy, *Materia Medica*, Pharmacognosy, Botany, Chemistry, and Toxicology, with practical work in pharmaceutical, microscopical, and chemical laboratories, and daily recitations during the term.

About two hundred and twenty-five lectures are delivered annually to each of the junior and senior classes and more than four hundred hours are devoted by each student to practical work in the several laboratories, and to recitations.

Following the precedent established some years ago by some of the older colleges of pharmacy, the graded course is adopted. The full course extends over two years, and the students are divided into junior and senior classes, composed of first and second course students, respectively. This arrangement, while adding greatly to the labors of the faculty, proves of much benefit to students by enabling the professors not only to introduce new and profitable subjects in their departments but by extending their lectures over two sessions, to take up the elementary work during the first, and the more advanced work during the second year.

PHARMACY

PROFESSOR BOERNER; MR. TEETERS, MISS COOPER.

The introductory lectures to the junior class will embrace a short review of the pharmacopœias of the United States, England, France, and Germany, and the various systems and appliances of weights and measures in use by the leading nations; the apparatus and methods necessary for the determination of the specific gravity of solids and liquids, and the sources and management of heat for pharmaceutical purposes. These will be followed by descriptions and illustrations of apparatus necessary to conduct properly the processes of percolation, filtra-

tion, comminution, sifting, solution, precipitation, neutralization, evaporation, distillation, sublimation, etc.

The official drugs will be considered by groups, the classification being based upon the more prominent proximate constituents contained in the drugs under consideration, beginning with those substances containing prominently lignin, and passing in order to those containing starches, sugars, gums, resins, oleo-resins, fixed oils, volatile oils, alkaloids, glucosides, neutral principles, etc. All the preparations of a drug will be considered together. To aid the student in memorizing the strength of official preparations, these will be considered by pharmacopœial classifications.

The lectures to the senior class will begin with a short review of the subjects embraced in the junior course, followed by a critical study of the preparations of the United States Pharmacopœia, classified according to the character of their active or medicinal constituents. The relation they sustain to each other will be considered, and whenever practicable, the methods of their preparation will be demonstrated, the aim being to apply the theories and general principles taught in the junior course.

The concluding lectures of the course will be devoted to extemporaneous pharmacy, such as the preparation of emulsions, pills, suppositories, solutions, ointments, etc., and the dispensing of physicians' prescriptions, the preparation of toilet articles, perfumery, etc.

The adulteration and sophistication to which official preparations are subject, and the methods for their detection will be noticed to the extent which their importance may demand.

The pharmaceutical laboratory, provided with the necessary conveniences, apparatus, and material for thorough practical instruction, will be open daily during the greater part of the school year. The instruction will embrace practice in the use of thermometers, hydrometers, specific gravity bottles, and balances; the preparation of tinctures, syrups, oleo-resins, solid and fluid extracts, pill masses, compound powders, solutions, hypodermic and compressed tablets, and many chemicals, such as the official iron solutions, scale salts of iron, mercury and lead compounds, which the apothecary should and can prepare for himself, both with advantage and profit; extemporaneous pharmacy, including the preparation of emulsions, pills, plasters, suppositories, prescriptions, the application of pharmaco-

pecial tests, the manufacture of handkerchief extracts, colognes, satchet powders, etc.; in short, practice in all the varied duties of a first-class pharmacy. The greatly improved facilities of the Laboratory Building will permit of the introduction of work found impracticable for preceding classes.

Instruction in this branch is now looked upon as of the utmost importance in pharmaceutical education, especially as much of the work formerly conducted entirely by the apothecary is now in the hands of large manufacturing establishments, and the student in pharmacy is thereby deprived of many valuable opportunities for gaining the necessary experience and self-confidence in drug stores, which a personal acquaintance with the various manipulations is sure to bring about. The instruction in this laboratory will be individual; the progress made will, therefore, depend upon the student's knowledge and exertions.

All students desiring to graduate from this school are required to pursue this course during the junior and senior years.

Students will be furnished with all necessary apparatus and material, but will be required to pay for all breakage or damage to apparatus while in their possession.

CHEMISTRY

PROFESSOR ANDREWS; DR. VON ENDE, MR. BRINK.

The laboratory work will be divided into two distinct courses, both of which are requisite for graduation, but only one of which can be taken by the student during either of the two college years.

JUNIOR YEAR—The junior year comprises instruction in the general principles of chemistry, and in qualitative analysis, arranged with special reference to pharmaceutical preparations.

The lectures elucidate the fundamental laws of the science, demonstrating them, whenever possible, by numerous experiments performed before the class. The chief metallic and non-metallic elements with their more important compounds and reactions are considered. The practical application of the principles of chemical calculation, by which the composition of compounds may be deduced from their formulas, in consequence of its great importance to the pharmacist, is carefully

inculcated. Instruction in details of the work and in matters of manipulation is conveyed in the laboratory course, which occupies, on an average, seven hours a week. Here the student is taught by a systematically arranged series of experiments the properties of the commonest chemical agents, and how to handle chemical apparatus properly. When some manipulative skill is attained, qualitative analysis is taken up. The characteristic reactions of bodies as applied to their detection in mixtures are made familiar in a series of examples, beginning with the simplest substances and passing gradually to the more complex, such as are met with in the practice of pharmacy. The student is expected at the conclusion of this course to be able to test the purity of official preparations and to detect the nature of any adulteration which may be present. He is required to pass a practical examination covering this ground.

SENIOR YEAR—Quantitative analysis is taken up, particular emphasis being laid upon volumetric processes, as these, by virtue of the ease and rapidity with which they are executed, are of the greatest general usefulness.

The chemical reactions used for detecting morphine, strychnine, and other alkaloidal and coal tar products of pharmaceutical importance are studied in the laboratory, and the class is exercised in the practical analysis of mixtures of such substances.

Practice is given in the valuation of numerous inorganic and organic pharmaceutical preparations and in the methods of controlling or determining their exact strength. A laboratory examination concludes the course.

PHARMACOGNOSY

PROFESSOR MACBRIDE.

This course is intended to present the organic *Materia Medica* from the standpoint of the biologist, with a view to enabling the student to handle his materials intelligently and to identify them in accordance with the recognized principles of biologic science. The various drugs of organic origin are taken up in the order of their natural classification, the principal facts as to their nature, origin, and preparation are set forth in a series of lectures illustrated by abundant material

in original packages, as well as by herbarium specimens (in the case of plants), charts, drawings, microscopic preparations, etc.

Winter. One hour a week, commencing about September 20.

Ample cabinets of *Materia Medica* are at hand, and free use is constantly made of the magnificent collections now found in the Herbarium of the University.

Text-Books: Flueckiger's *Principles of Pharmacognosy*; Maisch's *Materia Medica*; Bentley and Trimen's *Medicinal Plants*; Millspaugh's *American Medicinal Plants*; *The United States Dispensatory*; *The National Dispensatory*.

BOTANY

PROFESSOR SHIMEK.

Three courses are offered in Botany:

COURSE 1—General Botany—This course is devoted to a careful study of the elements of the science. The various organs of the plant are reviewed and the local autumnal flora is made to afford abundant material to illustrate, in the hands of the student, the morphology of roots, stems, and leaves, as well as the ordinary principles of floral analysis, and the means of specific identification. Types of the principal orders of greatest economic value are studied in detail.

JUNIOR YEAR, fall term. Two hours a day for the first six weeks.

COURSE 2—The second course is devoted to an inquiry into the life and growth of the plant; the cell, its morphology and products; the morphology of the entire plant structure as a means of identification. It includes laboratory work with the microscope, and evening lectures illustrated by numerous stereopticon views.

JUNIOR YEAR. One hour a week during fall and winter terms, following Course 1.

COURSE 3—Microscopic Technology—This course includes instruction in the use of the compound microscope, and its employment in the investigation of vegetable structures. The student is supplied with an instrument and all necessary reagents and apparatus, and is taught the various modes of cutting, staining, and mounting histological preparations. Practical instruction is given in the use of the microscope in the identification of crude drugs, as well as in the detection of

adulteration. Each student taking this course prepares at the laboratory for his own use a cabinet of microscopic slides, illustrative of many of the more important official drugs.

SENIOR YEAR, winter term. Two hours a week.

Students in all these courses are afforded ample laboratory facilities, and the splendid botanical collections in the University Herbarium are always available for illustrations and comparative study.

The following list includes the principal text-books: Macbride's *Lessons in Elementary Botany*; Wood's *Class Book of Botany*; Gray's *Manual of Botany*; Goodale's *Physiological Botany*.

MATERIA MEDICA

PROFESSOR CHASE.

This branch will be presented to the students of the College of Pharmacy from a twofold standpoint, namely, that of extemporaneous pharmacy, and that of the prescribing physician. To this end a brief outline course in Physiology illustrative of the functions of the more prominent organs of the body will precede the discussion in detail of the subject matter that more properly belongs to this chair. However, the professor in charge feels that the pharmacist can best serve those who seek his aid by having a general apprehension of a few of the salient points that belong chiefly to the physiologist.

JUNIOR YEAR. The members of the junior class will be given preliminary definitions of the subject; also various terms, such as alkaloids, glucosides, leucomaines, ptomaines, gums, resins, etc., etc. Also the various official preparations will be defined and discussed. The routes and modes of administration of remedies, and their physiological and toxicological action will likewise be considered. The origin, source, composition, chemical characteristics, and physical properties, the modes of preparations, etc., of each drug will be noted briefly, their more elaborate consideration being referred to the chair of Pharmacognosy.

The subject of prescription writing, including incompatibles, their classifications, and their instantaneous detection and means of avoidance will be subjects for careful consideration and drill. Cumulative action of drugs in the system—how it may occur and how it may be avoided—will also be discussed.

The common and metric systems of weights and measures will receive due attention. Finally, with the subject of dosage considered at length, the student will be assumed to be ready to be introduced formally to the chief drugs made use of in his profession. To this end organic drugs of both vegetable and animal origin will be first considered. The student will be required to make full and exhaustive notes on each lecture at the time of its delivery, and also to present a carefully prepared transcription of the textual matter found in the text-book used. A very excellent and natural grouping of drugs considered will be followed, based upon the dominant action of the leading drug of the group or class to which such drugs may be assigned. In this manner systematic study is preserved and the subject matter much more easily retained. Frequent quizzing, recitations, and written tests, supplement the student's part of the work, thereby facilitating the retention of the facts presented.

SENIOR YEAR. This course is an amplification of the preceding. The senior class is given a rapid review of the subject matter of the junior course and then completes the unfinished portion of this part of the work. A brief course in Inorganic Materia Medica, comprising the more important drugs made use of in pharmacy, is likewise presented to the members of this class. With frequent reviews, tests, drills, etc., the class will, before the termination of the session, complete the subject, review and pass it. Prescription writing will be dwelt upon in this course as in the preceding year so as to make sight reading and detection of errors possible. The physiological action of drugs is also specially presented, antagonistic and synergistic remedies being noted. Thus with a review of the entire subject, this class is led to a general comprehension of the fundamental principles and knowledge of the leading drugs used in this important branch of their course.

TOXICOLOGY

DR. ROCKWOOD.

The course consists of one lecture a week during the entire session. The general action of poisons is first considered, then the most important ones are treated separately. Their physical properties and chemical action are noticed, together with their uses, and most common sources as toxicological agents. The symptoms of the different classes are given, and the treat-

ment for each. Especial attention is paid to antidotes. Methods of testing suspicious substances, as well as the examination of secretions and excretions, are explained and illustrated by experiments.

PRIZES

By the liberality of Mr. John M. Lindly, a prize consisting of Britton & Brown's Illustrated Flora is offered to the student of the senior class who shall bring from his home county the best herbarium of not less than fifty plants. The candidate before receiving the prize must become a member of the University Pharmacy Alumni Association, and the collection shall become the property of Mr. Lindly.

TUITION

The fee for tuition is \$75 for each year, of which \$50 is payable on entering and the remainder on or before January 10. There are no extra fees whatever, but for each laboratory course in chemistry or practical pharmacy there is required a deposit of \$3 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student on presentation of the certificate of the professor in charge of the laboratory in question.

The above statement of fees is now in effect and will be understood to apply to all students in the College, entirely irrespective of the date of matriculation.

All fees must be paid to the Secretary of the Board of Regents, William J. Haddock.

All students who are delinquent in the payment of tuition will be suspended from the College until the tuition is paid.

QUALIFICATIONS FOR GRADUATION

Every person upon whom the diploma of this College is conferred must be of good moral character, must have arrived

at the age of twenty-one years, must have attended two full courses of lectures, the last one of which shall have been in this College, including two full courses of pharmaceutical, microscopical, and chemical laboratory practice, and must pass satisfactory written examinations in all the branches taught in this College. He will then be entitled to the degree of Graduate in Pharmacy (Ph. G.).

FINAL EXAMINATIONS

The examinations of candidates for graduation will take place during the week preceding the close of the lecture season.

WEEKLY EXAMINATIONS

As auxiliary to the lectures, the professors and instructors will hold frequent quizzes in their respective departments, to serve as reviews of the subjects discussed in the lectures.

TEXT-BOOKS

Pharmacy—For juniors: *U. S. Pharmacopœia*, Remington's *Practice of Pharmacy, National Formulary*. For seniors: All the above, Caspari's *Treatise on Pharmacy*, Coblenz's *Handbook of Pharmacy*, Scoville's *Art of Compounding*.

Chemistry—*Pharmaceutical and Medical Chemistry*, by Sadtler and Coblenz.

Pharmacognosy—Maisch's *Organic Materia Medica*.

Materia Medica—White & Wilcox's *Materia Medica and Therapeutics*, Sayre's *Organic Materia Medica and Pharmacognosy*, Culbreth's *Materia Medica and Pharmacology*.

Botany—Macbride's *Lessons in Elementary Botany*, Gray's *or Wood's Manual*.

REFERENCE BOOKS

U. S. Dispensatory, National Dispensatory, Fresenius' Analytical Chemistries, Hoffman and Power's Examination of Medicinal Chemicals, Gray's Botanical Text-Book, Vol. II.

WEIGHTS AND MEASURES

The State standards of weights and measures are kept at Iowa City, under the direct supervision of L. G. Weld Professor of Mathematics and Astronomy, and Dean of the Graduate College.

For further particulars address Emil L. Boerner, Dean of the College of Pharmacy, Iowa City, Iowa.

Students in All the Colleges

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THE COLLEGE OF LIBERAL ARTS

DEGREES CONFERRED JUNE, 1900

DOCTOR OF PHILOSOPHY

Merritt, Fred D., B. S., M. A.

MASTER OF ARTS

Ensign, Forest C., B. Ph. Owen, Erza Lois, B. Ph.
Fracker, George C., B. Ph. Seymour, Libbie, B. A.
Lodwick, Libbie, B. Ph.

MASTER OF SCIENCE

Fitzpatrick, Thomas J., B. S. Goettsch, Henry Max, B. S.

BACHELOR OF ARTS

Baughman, Ruby	Moulton, Mark Mills
Eddy Helen M.	Page, Edna Elizabeth
Egan George William	Polk, Mamie
Fesenbeck, Ida	Rall, Edward E.
Hoskins, John Bennett	Reed, William Henry
Howard, John Raymond	Sabin, Edwin LeGrand
Hunt, Percival	Webber, Charles Albert
Johnson, Mary Gertrude	Whitaker, Ellis John
Kindall Joseph W.	Whitmore, Clara B.
Martin, Worley George	

BACHELOR OF PHILOSOPHY

Adams, Wilber H.	Hensen, Louis
Baker, Frank Milton	Hoffman, William Louis
Balle, Minnie Marie	Hubbell, Rena
Belz, Jacob Otto	Hurst, Margaret Lillian
Bloom, Myra	Klincker, Peter John
Blythe, Edward Ellsworth	Lambert, Byron J.
Brockway, Alice R.	Lasheck, Adelaide E.
Chamberlain, William W.	Macomber, Edith Katharine
Clearman, Hattie M.	Miller, Frank G.
Cole, Arthur Casburn	Mitchell, Ernest Roy
Daum, Selma A.	Ogden, Raymond Davis
Deems, Oren Manferd	Osborn, Winston Charlotte
Fellingham, John H.	Park, Elmer Remle
Ferson, Merton Leroy	Pinkham, Leda
Fletcher, George H.	Remley, Bertha
Heath, Maggie May	Remley, James Edward

Roach, Lorin J.	Sprague, Edna Mabel
Robinson, Alta Aileen	Springer, William James
Safley, Margaret James	Stockwell, Steven S.
Saunders, Herbert C.	Sweeney, Gail
Schoonover, George L.	Thompson, John Morrow
Schultz, Dorothy Ward	Way, Kathryn Wealtha
Shellenberger, Emma White	Wells, Frank
Shuck, May	Wise, George Chester
Simonton, Thomas Milton	Yates, Edward Gilbert
Speers, Albert Percy	

BACHELOR OF SCIENCE

Albert, Henry	Louis, Edmund J.
Angus, Haney Adelbert	Mauthe, Katherine
Beach, Carl Hoff	Newbold, Belle Edna
Beck, William Edmund	Phillips, Albin Blackmore
Blackmore, Auzman Hodgen	Rogers, Earl Bertram
Childs, Hal Augustan	Safford, Abbie M.
Consigny, Eugene Frank	Sieg Lee Paul
Eaton, William H.	Spurgeon, Floris J.
Fairall, Henrietta	Stromsten, Frank Alb
Groendycke, Clara Louisa	Tuttle, Stella
Harkness, Gordon Follett	Waite, Lillian Ethel
Howell, Lloyd	Werts, Charles M.
Jones, Clyde Ray	Wieneke, Laura Ann
Kemmerer, T. Wilbert	

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Beard, William Finis	Knapp, Leo
Fatherson, Thomas W.	Meggers, Frank Henry Jr
Hunter, Lemuel Amos	Robish, Albert Arrand

SENIORS

Alden, Harry Francis	Cl.	Davenport
Anderson, Laura	Ph. A.	Iowa City
Arnold, Henry Stephen	Ph. B.	Davis City
Bailey, Frank Sidney	Ph. B.	Iowa City
Bailey, Frederick William	Sci.	Iowa City
Ball, George Washington	Ph. B.	Iowa City
Bannister, Robert James	Ph. A.	Ottumwa
Barton, Harry Raymond	Cl.	Estherville
Bechly, Edward,	Ph. B.	Scarsboro
M. Di., '98, Iowa State Normal.		

STUDENTS—COLLEGE OF LIBERAL ARTS 391

Birk, Levi Albert	C. E.	Anamosa
Boardman, Benjamin,	Ph. A.	Portsmouth
	M. Di., '99,	Iowa State Normal.
Boler, John	Ph. B.	Atlantic
Bond, Ethel May	Ph. A.	Sioux City
Bond, Perry Avery	Sci.	Sioux City
Brackett, Otto Thomas	Sci.	Iowa City
Branson, Laura House, M. D. '85	Sci.	Iowa City
Briggs, Fletcher	Ph. B.	Nevada
Brockway, James Madison	Ph. B.	Iowa City
Buffum, Hugh Straight	Cl.	LeRoy
Burrier, Emmett Francis	Sci.	Farmington
Burrus, James Harvey	Cl.	Winterset
Burton, Harry Edward	Cl.	Onawa
Carroll, Elizabeth Fawcett	Ph. A.	Cedar Rapids
Carson, Mabel E	Cl.	New Sharon
Chantry, Lillian	Ph. B.	Malvern
Clapp, Mortimer Edwy	Sci.	Shelby
Cogswell, Charles Herbert	Sc.	Cedar Rapids
Collins, Frank Butler	Ph. B.	Grundy Center
Converse, Charles Crozat	Ph. B.	Cresco
Cook, Roy Arthur	Cl.	Independence
Cooper, Elizabeth Janette	Ph. A.	Winterset
Cox, Clifford Vernard	Ph. B.	Newton
Dodds, Calvin Stewart	Ph. B.	Wyman
	M. Di., '97,	Iowa State Normal.
Downing, Ralph Vernon	Cl.	Wellman
Drake, Fred Collins	Ph. B.	Adel
Dye, Charles Wesley	Sci.	Macedonia
Ede, Ernest D.	Ph. A.	Earlville
Fesenbeck, John Alvin	Ph. B.	Danbury
Gilchrist, Janet Marjorie	Ph. A.	Iowa City
Gleason, Fred Brockway	Sci.	Davenport
Gow, Annie Louise	Cl.	Greenfield
Gow, James Ellis	Ph. A.	Greenfield
Griffith, Harry Melvin	Ph. B.	Mt. Ayr
Griffith, John George	Sci.	Iowa City
Hanson, Frank F.	Sci.	Monmouth
Henry, Carl Jeffrey	Ph. B.	Butler, Mo.
Henshire, Mildred	Ph. A.	Iowa City
Hickenlooper, Thos. Wallace	C. E.	Albia
Hoffman, Paul McConnell	Sci.	Muscatine

Howard, Alice Harriet	Sci.	Marshalltown
Hruska, Victoria	Cl.	Spillville
Hurst, John Francis	Sci.	Leon
Jensen, Frank Thomas	C. E.	Dysart
Johnson, Jessie Florence	Cl.	Farlin
Johnson, Kittie May	Ph. B.	Iowa City
Jorgensen, James Edward	Cl.	West Side
Joy, Florence Livingston	Ph. A.	Iowa City
Kelley, Rita Amanda	Ph. B.	Iowa City
Kephart, Milton Lawrence	Ph. B.	Shueyville
Kingland, Thomas Andrew	Ph. B.	Forest City
Kuck, Orlando Adolph	Ph. B.	Charles City
Laartz, Christopher H.	Ph. B.	Atlantic
Lambert, Byron James,	C. E.	Cedar Falls
	B. Ph., '00.	
Lambert, Charles Irwin	Sci.	Cedar Falls
Lodwick, Deca	Ph. B.	Iowa City
Lovell, Guye E.	Ph. A.	Garner
McClain, Donald	Cl.	Iowa City
McCord, Charles Joseph	Cl.	Iowa City
McCulla, Walter Philo	Ph. B.	Sutherland
McGee, Alice Florence	Ph. B.	Iowa City
McKenzie, John Augustus	Cl.	Living Springs
Mantz, Frank Jesse	Sci.	Audubon
Merriau, Fred Simmons	Ph. B.	Marble Rock
Miller, John William	Ph. B.	Manning
Moore, Lina Haviland	Cl.	Ft. Dodge
Moore, William Franklin	Cl.	Dale
Mullin, George Henry	Ph. B.	Iowa City
Page, Clarence Vernon	Cl.	Iowa City
Pearson, Abby Belle	Ph. A.	Dysart
Perkins, Daniel R.	Ph. B.	Carson
Plock, Henrietta Dorothy	Cl.	Burlington
Reid, Frank Beatty	Cl.	Oskaloosa
Remley, Arthur L.	Ph. B.	Anamosa
Remley, George Edwin	Ph. B.	Iowa City
Rice, Stephen Edward	C. E.	Green Mountain
Rider, Etta Jane	Ph. B.	Mt. Ayr
Rosser, Bert Paul	Sci.	Troy
Rue, Lars O.	Sci.	Ridgeway
Russell, Earl Willard	Cl.	Adel
Scales, Richard Elmo	Ph. B.	Ackley

STUDENTS—COLLEGE OF LIBERAL ARTS 393

Shaw, James Daniel	Ph. B.	Charles City
Slavata, Jennie Elizabeth	Ph. A.	Iowa City
Smith, Charles Horton	C. E.	Iowa City
Soesbe, Clarence William	Cl.	Greene
Sterling, Editha Hortense	Ph. B.	Iowa City
Stover, Bessie Esther	Sci.	Iowa City
Swisher, Esther McDowell	Cl.	Iowa City
Treimer, Anna	Sci.	Dixon
Tuttle, Lauren Taylor	Ph. B.	Burlington
Umberger, Thos. Daniel Terrill	Sci.	Burlington
Waller, Mary Ethel	Ph. A.	Charles City
Warren, Madison Clyde	Sci.	Glenwood
Weeks, Gaylord D.	C. E.	Iowa City
Willett, James Horace	Cl.	Tama
Willis, Bertha Belle	Ph. A.	Iowa City—105

JUNIORS

Achenbach, Naomi	Ph. B.	Gladbrook
Allen, Henrietta Frances	Sci.	Allenwood, Pa.
Anderson, Rudolph Martin	Ph. B.	Iowa City
Anthony, Charles Henry	Sci.	Iowa City
Bailey, Katherine Ethel	Cl.	Iowa City
Ball, Margaret Adell	Cl.	Cedar Falls
Barber, Myrtle	Ph. A.	Estherville
Barr, William Milton	Ph. B.	Woden
Barrett, Anna Moore	Ph. A.	Iowa City
Barrett, Jacob Edward	Ph. B.	Dunlap
Bell, William B.,	Cl.	Milton
M. Di., '99, Iowa State Normal.		
Bemis, Frances Perl	Ph. A.	Estherville
Black, Anna Bell	Cl.	Shellsburg
Boddy, Marshall Vincent	Ph. B.	Spencer
Bozarth, Maud,	Ph. B.	Cedar Rapids
M. Di., '99, Iowa State Normal.		
Brackett, Merritt	Cl.	Iowa City
Butler, Lindley Moses	Ph. A.	Forest City
Call, Roy Guyon	El. Eng.	Iowa City
Carder, Helen L.	Ph. A.	Iowa City
Carter, Leila Belle	Ph. B.	E. Iowa City
Casady, Thomas	Cl.	Des Moines
Clapp, Albert Carpenter	Sci.	Shelby
Clark, Maud Geneva	Ph. A.	McGregor

Clearman, Rollen Ives	Ph. B.	Iowa City
Close, Katherine Stevens	Ph. A.	Iowa City
Cory, Charles Seldon,	Sci.	Fredericksburg
M. Di., Iowa State Normal.		
Currier, Albert Moore	Cl.	Iowa City
Davis, Florence Mabel	Ph. A.	Sioux City
Dayton, Leona Mellie	Ph. B.	Waukon
Delavan, George Edwin	Cl.	Estherville
DuBois, Walter Lynn	Sci.	Rockwell City
Dykstra, Sylvester Henry	Cl.	Pella
Eaker, Jay Felts	Cl.	Pella
Eaton, John Alvin	C. E.	Creston
Eberhart, Frank Vaughan	Sci.	Newton
Eller, Chester John	Ph. B.	Pekin
Emry, Frederic Grant	Ph. B.	Brighton
Espeset, James Howard	Ph. B.	Estherville
Ewers, Albert Francis	Sci.	Albia
Fenton, Jennie Inez	Ph. B.	Eldora
Filer, Paul Schenck	Cl.	Parkersburg
Fitch, Eva Lillian	Cl.	Lytton
Fitch, Harry Holland	Cl.	Lytton
Fitz, Joseph Holland	Sc. & M.	Panora
Ford, D. Fae	Ph. B.	Manchester
Funson, Harry Shugart	Ph. B.	Nevada
Geyer, Ellen	Ph. B.	Cedar Rapids
Graham, Joseph W.	Cl.	Mechanicsville
Hagler, Elisha Marion	C. E.	Milton
Hanson, Roy Marsh	Ph. B.	Mt. Pleasant
Hartley, Charlotte Marion	Ph. B.	Iowa City
Hayler, George Rex	C. E.	Ft. Dodge
Hollenbeck, Henry Stanley	Cl.	Sheldon
Hoover, Alden Robbins	Sc. & M.	Muscatine
Houser, Paulina May	Ph. A.	Iowa City
Hull, Pearl	Ph. A.	Iowa City
Huntington, Harry Garfield	Ph. B.	Onawa
Johnson, Joel Ernest	Ph. B.	Marathon
Kent, Grace Helen	Cl.	Victor
Kingsbury, Maude Cleaveland	Ph. B.	Iowa City
Kirby, James Francis	Ph. B.	Williamsburg
Knouse, David Alexander	E. E.	Wilton Junction
Krause, Charles Schutz	Sc.&M.	Garwin
Lowman, Stella Elizabeth G.	Ph. B.	Iowa City

STUDENTS—COLLEGE OF LIBERAL ARTS 395

Luhman, Frederick Henry	Ph. B.	Postville
Lynch, Robert James	Sc.&M.	Eagle Grove
McCabe, Richard William	Ph. B.	Davenport
McVey, Albert Dennis	Ph. B.	Oskaloosa
Macbride, Jean	Ph. B.	Iowa City
MacKellar, Jennie Edith	Ph. B.	Washburn
Macy, Clarence Spencer	Sci.	Adel
Manhard, Edward	C. E.	Farmington
Mark, John H.	Cl.	Grand Meadow, Minn.
Marsh, Richard Dana	C. E.	Marshalltown
Martin, John Weston	Cl.	Fonda
Mason, Ralph Taylor	Ph. B.	Albia
Maudlin, Mina May	Cl.	Ladora
Mead, Ray C.	Ph. A.	Wall Lake
Mehaffy, John Milton	Cl.	Morning Sun
Meyerholz, Charles	Ph. B.	Wapello
Mingus, Edna M.	Cl.	Iowa City
Minkel, Lewis Herman	Ph. B.	Dysart
Moler, Margaret Imo	Ph. B.	Iowa City
Moulton, Helen Field	Cl.	Glenwood
Mueller, Eugene Fred	Cl.	Denison
Mueller, Mary Theresa	Ph. A.	Iowa City
Namur, Cecelia Barbara	Ph. B.	Iowa City
Otto, Lucia Caroline	Ph. B.	Iowa City
Overholt, Mabel E.	Ph. B.	Iowa City
Paarman, Juergen Herman	Sci.	Davenport
Parsons, Ella Beckley	Ph. B.	Iowa City
Pinkham, James Edmunds	Ph. B.	Sioux Falls, So. Dak.
Porter, Mary Monta	Cl.	Albia
Quigley, Sarah Ruth	Ph. A.	Iowa City
Raguet, Conde LeRoy	Cl.	Davenport
Randall, Frank Hall	Cl.	Denison
Randall, Otis J.	Ph. B.	DeSoto
Remley, Alfred G.	Ph. B.	Anamosa
Resser, Jesse	Ph. B.	Perry
Rich, David W.	Cl.	Wayland
Roach, Lena	Ph. A.	Rock Rapids
Roberts, Carl Eckley	Cl.	Butler
Rule, Edward A.	Sci.	Des Moines
Schell, Mary Margaret	Ph. B.	Montezuma
Seerley, Florence	Ph. A.	Burlington
Seymour, William I.	C. E.	Iowa City

Smith, Mabel Clare	Cl.	Harlan
Smith, Robert Lee	Ph. B.	Leon
Speidel, Homer Vincent	Sci.	Iowa City
Storck, Arthur Herman	Sci.	Earlham
Storey, Leslie	Ph. B.	Iowa City
Stuart, Clara	Ph. B.	Iowa City
Sunier, Fanny Annette	Ph. B.	Iowa City
Switzer, Grace Ellen Elizabeth	Ph. B.	Iowa City
Thomas, Cecil Elizabeth	Sci.	Decorah
Tobin, Margrret Allie	Cl.	Ft. Dodge
Truman, Emma Victoria	Ph. A.	Sloan
Tulloss, Carolyn M.	Ph. A.	Iowa City
Whited, Lydia	Ph. B.	Belmond
Williamson, Ralph Clinton	Ph. B.	Iowa City
Willis, Faith Gertrude	Ph. B.	Iowa City
Wilson, Ida May	Ph. A.	Cedar Falls
Wilson, Mary Alwilda	Ph. B.	Shenandoah
Wright, Hiram Newton	Ph. B.	Mt. Pleasant
Wyant, Arthur C.	Sci.	Sigourney—125

SOPHOMORES

Albert, Fred	Sci.	Reinbeck
Baughn, Wilmot Lawson	Sci.	Harlan
Beebe, Goldie May	Sci.	Mason City
Boehm, Walter Martinus	Sci.	Fort Dodge
Brown, Edwin Keech	Ph. B.	Solon
Brown, Maud Anna	Ph. B.	Marengo
Bulger, Joseph Stanhope	Ph. B.	Des Moines
Carlson, Ernest Emil	C. E.	Battle Creek
Carter, Edward Albert	Ph. B.	Muchakinock
Cash, Emma May	Cl.	Webster City
Cassady, Raymond Whiting	Ph. B.	Whiting
Charlton,, Max Rosecrans	Sci.	Clear Lake
Choate, Rufus Clark	C. E.	Iowa City
Clearman, Albert Edward	E. E.	Iowa City
Coast, William Oscar	Sci.	Iowa City
Cory, Mrs. Charles Seldon	Ph. B.	Fredericksburg
Coyne, William Lawrence	Ph. B.	Bricker
Cronin, Sarah Elizabeth	Sci.	Marcus
Curtis, Alice Bertha	Ph. B.	Allison
Dakin, Amy Dorothy	Ph. B.	Mason City
Dalton Ula Elizabeth	Cl	Jesup

STUDENTS—COLLEGE OF LIBERAL ARTS 397

DeBusk, William Hayden	Cl.	Panora
Doran, Thomas Cyrus	Sci.	W. Burlington
Drewry, Ray Forest	Ph. B.	Sac City
Dunkel, George	C. E.	Iowa City
Dykstra, Clarence Addison	Cl.	Pella
Edmondson, Charles Howard	Ph. A.	Milton
Elliott, Ethel Anna	Cl.	Marshalltown
Elson, Lena	Ph. B.	Lineville
Estes, Reuben Marion	Ph. A.	Thurman
Fish, James Wilson	Ph. B.	Britt
Fitzpatrick, Daniel Helen	Ph. B.	Ft. Dodge
Forncrook, Elva Marcella	Cl.	Iowa City
Foster, Blanche Fairfax	Ph. B.	Iowa City
Foster, Charles Clarence	C. E.	Iowa City
Gay, Anna May	Cl.	Iowa City
Greene, Galen Edwin	Cl.	Greene
Griffith, Mary Caroline	Ph. A.	Iowa Falls
Grillett, Ida Louise	Sci.	Sioux City
Hadley, Herbert Erwin	Ph. B.	Badger
Halleck, Joseph Dwight	E. E.	Vinton
Hanson, Clarence Henry	Sc. & M.	Ft. Dodge
Hardman, Roy Cardis	C. E.	Tipton
Hayes, Elenora Byington	Cl.	Villisca
Hazard, Leland Arthur	Sci.	East Randolph, N. Y.
Hegerich, George Harold	C. E.	Iowa City
Henry, Ward Casady	Cl.	Des Moines
Hess, Adam Konigsmacher	Ph. A.	Council Bluffs
Hess, Sadie Murray	Ph. B.	Iowa City
Hill, George Edgar	Ph. B.	Burlington
Hossfeld, Eleanor	Ph. B.	Clermont
Hotz, Verda	Ph. B.	Iowa City
Hutchison, George Gaylord	Ph. B.	Lake City
Jarvis, Carolyn Belle	Ph. A.	Burlington
Johnson, Eliza Love	Sci.	Iowa City
Joynt, Martin John	Sc.&M.	Emmetsburg
Kelley, Edmund Levi	Ph. A.	Lamoni
Kelley, Richard Carlyle	Cl.	Lamoni
Kemmerer, Charles Tilghman	Ph. A.	Eldridge
Kemmerer, Leila	Ph. A.	Eldridge
Kemmerer, Sara Dorcas	Ph. A.	Eldridge
Kettlewell, Wallace Irwin	C. E.	Iowa City
Koontz, George Wilson	C. E.	Iowa City

Koop, Charlotte Calkins	Ph. A.	McGregor
Krebs, Robert D.	Cl.	Cedar Rapids
Landers, John Clement	C. E.	Webster City
Lauer, Ada Lucile	Cl.	Winfield
Lauer, Arnold William	Ph. A.	Winfield
Loizeaux, Jennie Olive	Ph. A.	Des Moines
Lorenz, Charlotte Marie	Cl.	Burlington
McClain, Henry Griffiths	Cl.	Iowa City
McCoy, Edward Hugh	Ph. B.	Dumont
McCrary, Samuel Henry	C. E.	Ireton
Matson, John A.	Sci.	Kossuth
Melton, Frank	Sci.	Villisca
Merritt, Edith Whitney	Ph. A.	Iowa City
Mitchell, Lebbeus Horatio	Ph. B.	Nevada
Moravec, Agnes Emma	Ph. A.	Belle Plaine
Morrison, Frederick Gould	C. E.	Chillicothe, Ohio
Mulock, Edwin Hulbert	Sci.	Colfax
Murphy, Charles Alonzo	Ph. B.	Laurens
Murphy, Genevieve Beatrice	Cl.	Iowa City
Norman, Charles John	Ph. B.	Van Meter
Nugent, Francis	C. E.	Iowa City
Page, Charles Price	C. E.	Iowa City
Pratt, Harlow Munson	Sci.	Kalo
Preston, Clara Carlton	Ph. B.	Elkader
Quigley, Marjorie	Cl.	Iowa City
Ransom, Bonnie Maude	Ph. A.	Neola
Reed, Roscoe Conkling	Ph. B.	Ida Grove
Rule, James Clarke	Sc.&M.	Des Moines
Shannahan, Edwin Joseph	Ph. A.	Holbrook
Shorett, Judson Willard	Ph. B.	Earling
Smith, Harry Clark	Ph. B.	Harlan
Smith, Maude Louise	Ph. B.	West Liberty
Spangler, Harrison Earl	Ph. B.	Adair
Sporleder, Mary Louise	Ph. A.	Iowa City
Stein, Lollie Alvine	Ph. A.	Burlington
Stover, Samuel Kirkwood	E. E.	Iowa City
Stryker, Clarence Andrew	C. E.	Creston
Swartz, Raymond Hamilton	Cl.	Iowa City
Sweney, Marshall Charles	C. E.	Osage
Swire, Ethelind	Ph. B.	Iowa City
Switzer, Katherine May	Cl.	Iowa City
Thomas, Seth	Ph. A.	Lettert, W. Va.

STUDENTS—COLLEGE OF LIBERAL ARTS 399

Trost, Frederick William	C. E.	Ottumwa
Varney, Cora C.	Ph. B.	Iowa City
Veblen, Agnes Kari Anna	Cl.	Iowa City
Waldron, Alice Margretta	Ph. A.	Greenfield
Walsh, John Graney	Sc.&M.	Perry
Watson, Harry Chabnail	Cl.	Emmetsburg
Watters, Harry Bertram	C. E.	West Liberty
Welch, Hershey Samuel	C. E.	North Platte, Neb
Whedon, Arthur DeWett	Sci.	Iowa City
White, Wilmer Welrose	Sci.	Panora
Whitley, Gladys Call	Cl.	Webster City
Wright, Charles Oliver	C. E.	Tipton
Yule, Mildred Rebecca	Sci.	Tipton—118

FRESHMEN

Alford, Lore	Ph. B.	Waterloo
Allen, Frank J.	Ph. B.	Scranton
Anderson, William Howard	Ph. B.	Maple Hill
Bailey, John William	Sci.	Iowa City
Baker, Florence	Ph. B.	Eldon
Ball, Henry Moffatt	C. E.	Iowa City
Ball, Walter McDowell	Sc. & M.	Iowa City
Ballard, Mary Elizabeth	Ph. B.	Iowa City
Balle, Sophia Margaret	Ph. B.	Denison
Bartholow, Claude Alpheus	Sci.	Yale
Beaulieu, Leo Victor	Cl.	Sheldon
Bergman, Roy Earnest	Ph. B.	Newton
Berryhill, James Guest	Sci.	Des Moines
Blum, Daisy Pearl	Ph. B.	Rossville
Boerner, Edna Louise	Ph. A.	Iowa City
Bosley, Roy Harrison	Ph. B.	Adair
Bowen, Jesse Clark	Sc. & M.	Maquoketa
Bradley, Frank Timothy	Ph. B.	Iowa City
Brackney, Herbert Winfield	Ph. B.	Washta
Brackney, Herman John	Ph. B.	Washta
Brainerd, Frederick Goodrich	Sci.	Clinton
Brainerd, Helen Louise	Ph. B.	Iowa City
Brockett, Louise	Sci.	Des Moines
Buckley, Fred Watson	Ph. B.	Shelby
Burgum, Harry Pitkin	C. E.	Oelwein
Burson, Albert Greenlee	Ph. B.	Fonda
Carpenter, Edwin Hager	Ph. A.	Burlington

Casady, Philip Murray	Sci.	Des Moines
Chesley, Frank Ephraim	C. E.	Iowa City
Clark, William Clarence	Sc.&M.	McGregor
Cline, Clifford,	Sci.	Cumberland
Coburn, Robert Leroy	Sc.&M.	Carroll
Coffin, Frank W.	Sci.	Columbus Junction
Cogswell, John Wilkinson	Sci.	Cedar Rapids
Cohen, Harry Dave	Sci.	Des Moines
Cole, Alvernus Humphrey	Ph. B.	Grundy Center
Cole, Marvin Luther	Sc.&M.	Adel
Confare, Bert	Ph. B.	Nevada
Corl, John Swinborn	Sci.	Spencer
Crane, Ernest B.	C. E.	Dexter
Crawford, Tillie Jane	Cl.	Wellman
Cross, Cash R.	Sci.	Corydon
Crowell, Lucius Alfred	Ph. B.	Fremont, Neb.
Cushing, Raymond George	Cl.	Kirkman
Daley, Gustave Johann	Cl.	Fertile
DeSelle, Anna Louise	Ph. B.	Iowa City
Diddy, Carl Foster	Ph. B.	Perry
Dixon, Frank Leslie	Ph. A.	Sheldon
Dixon, Ollie Edith	Sci.	Washington
Donohoe, Ellen Marie	Ph. B.	Morse
Dow, Cora	Ph. B.	Iowa City
Duff, Laura May	Ph. B.	Britt
Duggan, Abbie Lucy	Ph. A.	Sioux City
Dunlap, Fanny	Sci.	Ofallon, Mo.
Dye, Harvey Leroy	Sci.	Macedonia
Eddy, Mary Louise	Cl.	Marengo
Edgerton, Robert Henry	Ph. A.	Muscatine
Empkie, Clarence Arthur	Ph. A.	Council Bluffs
Everett, Laurette	Ph. B.	Cosgrove
Fagan, Ralph Mather	Ph. B.	Shelby
Farnsworth, Asa Alexander	Ph. B.	Cresco
Fletcher, George G.	C. E.	Marshalltown
Foster, Florence Irene	Ph. B.	Iowa City
Gardner, Frances Maud	Cl.	Avoca
Garland, Harrie S.	Sc.&M.	Harlan
Gates, Ernest H.	E. E.	Sheldon
Gordon, Mary Agnes	Ph. B.	Iowa City
Gordon, Pearl Avis	Ph. B.	Hamilton, Ill.
Gould, Harley Joseph	Ph. A.	New Sharon

STUDENTS—COLLEGE OF LIBERAL ARTS 401

Gutches, Roy Morris	C. E.	Osage
Heitsman, Jacob Clyde	Ph. B.	New Sharon
Hellberg, Will Fred	Ph. B.	Anamosa
Henderson, John Clayton	Sci.	Eldora
Hess, Marguerite	Ph. B.	Iowa City
Hermann, Cornelia Josephine	Cl.	Kosztá
Hoffman, Mabel V.	Cl.	Muscatine
Hofmann, Minnie	Sci.	Ottumwa
Hotz, Marcella Lucy	Ph. B.	Iowa City
Howland, Elisha Addison	C. E.	Eagle Grove
Huebner, John W.	Sci.	Iowa City
Hulsebus, Bertha Margaret	Ph. A.	Burlington
Hunt, Ralph Blaine	Ph. B.	Denison
Ivins, Harry M.	Sci.	Grundy Center
Johnson, James Orin Elmer	Ph. B.	Northwood
Johnson, Leander August	Sci.	Eagle Grove
Johnston, Edward Ray	Ph. B.	Iowa City
Jones, Edward Morris	Ph. B.	Iowa City
Kent, Carl Volney	Sci.	Marshalltown
Kern, Frank Dunn	Ph. B.	Reinbeck
Kimball, Frank Burton	Sci.	Iowa City
King, Lylas Sarah	Ph. A.	Grundy Center
King, Reuben Thompson	Cl.	Glenwood
Kingsbury, Cleaveland	Sci.	Iowa City
Kleinsorge, Rudolph Ernst	Sci.	LeMars
Koser, Lee Daniel	Sc. & M.	Iowa City
Kriechbaum, Bertha Emily	Ph. A.	Burlington
Kuhlemeier, Harry Floyd	Ph. B.	Burlington
Kunz, John Franklin	Ph. B.	Wesley
Landers, Lou Cornelia	Sci.	Webster City
Leathers, Victoria	Ph. B.	Mapleton
Letts, Ernest Grove	Ph. B.	Fairfield
Lewis, Edith Alice	Ph. A.	Harlan
Lilly, Fanny Parmer	Ph. A.	Burlington
McCoy, Bernard Eberth	Sc. & M.	Corydon
McLaughlin, Eleanor	Ph. B.	Mason City
Magowan, Florence Nettie	Ph. B.	Tama
Matson, Samuel Barclay	Cl.	Kossuth
Meakim, Roger Joseph	Sci.	West Burlington
Moffatt, Burnam A.	C. E.	Marshalltown
Moffitt, Chester Earl	Ph. B.	Fonda
Moler, Ida Muriel	Ph. B.	Kinross

Morris, Mary Makepeace	Ph. A.	Atlantic
Moulton, Lulu	Ph. A.	Maquoketa
Murphy, Bertilla	Sci.	Iowa City
Newman, Clarence Adelbert	Ph. A.	Edgewood
Newman, Marie	Ph. A.	Clarksville
O'Malley, Linus Celestine	Cl.	Cresco
Parsons, Ralph Lyman	C. E.	Iowa City
Pence, Ralph Arlo	Sc.&M.	Nashville
Peters, Harriet Dorothy	Ph. B.	Lyons
Plum, Harvey Leonard	C. E.	Iowa City
Prescott, Lee Washbon	Sc.&M.	Sioux City
Roberts, Jennie Ellen	Ph. A.	Iowa City
Romans, John Brown	Cl.	Denison
Rosenkranz, Mathilda Marie	Sci.	Iowa City
Royal, Malcolm Allen	Sc.&M.	Des Moines
Rundell, Mabel Anne	Ph. B.	Iowa City
Sanders, Stephen Willis	Sci.	Hartley
Scales, Alfred John	Ph. A.	Ackley
Scarr, Furniss Morton	Ph. B.	Cumberland
Schaefers, Rose Theresa	Ph. B.	Clermont
Schenck, Charles Plume	Sci.	Burlington
Sherwood, Francis Daniel	Sci.	Clearfield
Shultis, Chester Eugene	E. E.	Dallas Center
Shurtz, Oneida Pollard	Sci.	Boone
Smith, Alta Grace	Ph. B.	Harlan
Smith, Orpha	Ph. A.	Harlan
Speidel, Mae Elizabeth Agnes	Ph. A.	Iowa City
Spurgeon, Theodore	C. E.	Iowa City
Steele, Earl Newel	Ph. B.	Perry
Stephens, George Ware	Ph. B.	Wapello
Stiles, Howard McLean	Ph. A.	Harlan
Strohmeier, Elizabeth Mary	Ph. B.	Iowa City
Taylor, Maude Estella	Sc.&M.	Montezuma
Thomas, Abram Owen	Ph. A.	Williamsburg
Thompson, Elizabeth	Ph. B.	Armstrong
Thompson, John Wesley	Cl.	Wapello
Tobin, Richard Griswold	Cl.	Fort Dodge
Van Vleck, Alfred Wheeler	Sci.	Buffalo, N. Y.
Veblen, Gertrude Ingeborg	Cl.	Iowa City
Veblen, Signy Arndora	Ph. A.	Iowa City
Wall, William Garfield	Ph. A.	Panora
Walters, Lillie Mae	Ph. A.	Harlan

STUDENTS—COLLEGE OF LIBERAL ARTS 408

Warner, Alice Lee	Ph. B.	Iowa City
Warner, Orlyn Dorphon	Ph. B.	Iowa City
Watland, Clarence	Cl.	New Sharon
Weber, Harry	Cl.	Mt. Pleasant
Weber, John William	Sci.	Mt. Pleasant
Welch, David Sewall	.Sci.	Glenwood
White, Warren Henry	Ph. B.	Iowa City
Wieben, Edward Emil	Ph. B.	Dysart
Williams, Creighton David	Ph. B.	Neola
Williams, Earl Joseph	Sci.	Iowa City
Wilson, Clara Rosa	Ph. B.	Iowa City
Wolf, Bertha Sarah	Ph. A.	Tipton
Young, Iowa Madge	Ph. B.	North Liberty
Zika, George Albert	C. E.	Leslie
Zwilling, Dan Letson	Ph. B.	Nevada—168

UNCLASSIFIED STUDENTS

Bailey, Ellen Mary	Iowa City
Bedford, Lyman Daniel	Hudson
Blackmore, Harriet Narcissa	Aplington
Briggs, Charles Orin	Red Oak
Buckles, George Russell	Troy
Burnham, Elizabeth	Iowa City
Burton, Mrs. Eva Rose	Iowa City
Byrnes, Ralph Leonidas	Iowa City
Carr, Minnie Ida	Union
Chamberlin, Leila May	Creighton, Mo.
Chamberlin, Louise	Colorado Springs, Col.
Childers, Ethel Marion	Tracy
Colony, Cora Eleanor	Tiffin
Cooper, Esther Leiper	Winterset
Dabney, Clara Mabel	Winterset
Downey, Ezekiel Henry	Memphis, Mo.
Durkee, Harry Charles	Charles City
Ellis, Mamie Ruth	Iowa City
Everett, Emma Dolorosa	Cosgrove
Fellows, Lena Leota	Iowa City
Geyer, Philip Wesley	Cedar Rapids
Groves, Harry	Williamsburg
Hazard, Mrs. Minerva Calkins	Iowa City
Hosoda, Sachio K.	San Francisco, Cal.
Kemp, Louis Clayton	Bristow
Klise, Harrold Edward	Baxter

McKinley, Frederick William	Clermont
Maxwell, Mate	Duluth, Minn.
Miles, Emma Lulu	Lineville
Montgomery, Margaret	Wakonda, So. Dak.
Payne, Ivan Houghton	Iowa City
Purdum, Herschel Foster	Sac City
Reherd, Mary Louise	Geneseo, Ill.
Rhodes, Ruby Williams	Iowa City
Rhynsburger, Henry John	Pella
Ross, Ernest Haddock	Iowa City
Savage, John Elton	Hebron
Sawyer, Mrs. Lizzie Rowell	Iowa City
Schermerhorn, Lucien Vroman	Des Moines
Shaver, May Clare	Red Oak
Sheldon, Edward Lewis	Badger
Shillig, Elnora Elizabeth	Iowa City
Slade, Albert Arthur	Tiffin
Slavata, Clara Josephine	Iowa City
Smithson, Mrs. Grace Lillian	Buffalo, N. Y.
Stewart, Gretchen	Muscatine
Swoyer, Loemma E.	Iowa City
Wachtel, Lydia Elizabeth	New Hampton
Waite, Pearl Hortense	Iowa City
Walker, Henry Grass	Fontanelle
Ward, Edith Jane	Montour
Ward, Mrs. Lizzie Cheney	Iowa City
Warner, Bessie Gray	Iowa City
Weber, Frederick Henry	Mt. Pleasant
Wright, Fannie Laura	Owatomna, Minn.
Wright, Grace	Plato—56

STUDENTS IN PROFESSIONAL COLLEGES TAKING
WORK IN COLLEGE OF LIBERAL ARTS

Ahern, Timothy Joseph	Calmer
Ainsworth, Adelaide Lorena	Fort Dodge
Arthur, Edwin Calhoun	Little Sioux
Baird, Herbert John	DeWitt
Baker, Mark Emery	Iowa City
Bartlett, Herbert Gallup	Orchard
Birss, George Alexander	Tipton
Brose, Frank Verne	Ocheyedan
Brown, Clarence Aubrey	Sioux City
Burton, Albert Johnson	Iowa City

STUDENTS—COLLEGE OF LIBERAL ARTS 405

Galkins, Guy Smith	Iowa City
Cameron, William John	Des Moines
Churchill, Guy Reece	Muscatine
Clegg, Samuel Harvey	Ainsworth
Crary, Stephen Arnold	Boone
Crockett, Frank Walford	Eldora
Crowell, Charles Rollins	Fremont, Neb.
Crowley, Jay M.	Galva
Dahms, Edward John	Davenport
Daly, Eunice Elizabeth	Troy
Daum, Philip Hugh	Davenport
Dennis, William	Onawa
Dormoy, David Andrew	Algona
Downing, Harold Bliss	Wellman
Dulin, John Albert	Webster
Edson, Willis Charles	Blaine
Ellis, Dias Henry	Motor
Engelke, Charles Rufus	Sidney
Fitzpatrick, Miles Joseph	Ft. Dodge
Frank, Walter Clyde	Red Oak
Grant, Franklin Ferdinand	Ida Grove
Harned, Luther Martin	Lone Tree
Hart, Irving Harlow	Allison
Hays, Charles Rolvin	Missouri Valley
Healy, Patrick Henry	Metz
Heimback, Adolph James	Burlington
Heminger, Amos Lincoln	Keosauqua
Henderson, Lewis Wilford	Sibley
Higbee, Herbert George	Fairbank
Howell, George Key	Davis City
Hunter, Charles Randall	Exira
Hunter, John McCrary Griggs	Exira
Kelso, Charles David	Corodon
Kenyon, Earle Dudley	Onawa
Knapp, William Proctor	Grinnell
Kridelbaugh, Joe Wilford	Chariton
Kroger, Emil Tease	Princeton
Kugler, Arthur Alexander	Stacyville
Liebe, Carl Herman	Des Moines
McAllister, Fred J.	Tipton
McCutcheon, Fred Clifton	Iowa City
McDonald, William Joseph	Vinton

McElhinney, Roscoe Conklin	Dysart
McElroy, Isaac Erwin	Pleasant Prairie
Manatt, Guy Sterling	Grinnell
Marshall, Lloyd Earl	Davenport
Medin, John Theodore	Kensett
Morse, James Warren	Osage
Mowry, Ross Rutledge	Baxter
Ogden, Raymond Davis, Ph. B., '00	Williamsburg
Otis, Edmund Rufus	Monona
Pease, Herbert	Collins
Putnam, Clyde C.	Iowa City
Ritchey, Romney Moore	Portage, Wis.
Sailor, Edwin Allen	Lisbon
Saunders, Herbert Clifford, Ph. B., '00	Manilla
Sherer, Roy Eugene	Gliddon
Sherman, Fred	Rolfe
Shorett, Judson Willard	Earling
Smith, Thomas Corwin	Logan
Swain, Jay Wheaton	Humboldt
Thompson, Herbert Garfield	Muscatine
Tourgee, John Birney	Arthur
Turner, Edward Marsh	Iowa City
VanNess, Edwin Jones	Williams
Walker, James Henry	Denison
Walker, Robert Duncan	Denison
Wilcox, William Henry	Rolfe
Wilkinson, Philip Read	Winterset
Williams, Samuel Clyde	Shelby—80

REGISTERED VISITORS

Davies, Mrs. Alice Raines	Iowa City
Felkner, Elizabeth Alvaretta	Iowa City
Hindman, Mrs. Minnie Hemsted	Iowa City
Jones, Elizabeth	Iowa City
Nolan, Adelaide M.	Iowa City
Shoals, Mrs. Hattie Mabel	Iowa City
Stein, Sarah Elizabeth von	Iowa City—7

PHYSICAL TRAINING

Achenbach, Naomi	Gladbrook
Ainsworth, Adelaide Lorena	Fort Dodge
Boerner, Edna Louise	Iowa City

STUDENTS—COLLEGE OF LIBERAL ARTS 407

Bozarth, Maud	Cedar Falls
Carder, Helen L.	Iowa City
Carson, Mabel E.	New Sharon
Chatham, Irma	Iowa City
Colony, Cora Eleanor	Tiffin
Dixon, Ollie Edith	Washington
Elliott, Ethel Anna	Marshalltown
Everett, Emma Dolorosa	Cosgrove
Gordon, Pearl Avis	Hamilton, Ill.
Griffith, Mary Caroline	Iowa Falls
Hershire, Elizabeth Akers	Iowa City
Hossfeld, Eleanor	Clermont
Hughes, Louise Elizabeth	Iowa City
Jarvis, Carolyn Belle	Burlington
Johnson, Jessie Florence	Farlin
Johnson, Kittie May	Iowa City
Kent, Grace Helen	Victor
Koop, Charlotte Calkins	McGregor
Lewis, Edith Alice	Harlan
Lorenz, Charlotte Marie	Burlington
Lyon, Myra	Iowa City
MacKellar, Jennie Edith	Washburn
Moore, Lina Haviland	Fort Dodge
Moulton, Lulu	Maquoketa
Page, Edna Elizabeth	Iowa City
Parish, Susan Graham	Reidsville, No. Car.
Peters, Harriet Dorothy	Lyons
Preston, Clara Carlton	Elkader
Preston, Gertrude Elaine	Iowa City
Ridgway, Jessie Bleakley	Iowa City
Schell, Mary Margaret	Montezuma
Seerley, Florence	Burlington
Sherwood, Elizabeth Julia	Iowa City
Sherwood, Winifred Whitman	Iowa City
Stein, Lollie Alvine	Burlington
Sterling, Editha Hortense	Iowa City
Stockdale, Ella Naoma	Iowa City
Swisher, Esther McDowell	Iowa City
Thompson, Margaret Adelaide	Iowa City
Wilson, Clara Rosa	Iowa City—48

SUMMER SESSION OF 1900

Bailey, Fred W.	Iowa City
Barrett, Mary	Iowa City
Bergen, Cary von	Iowa City
Blackmar, H. E.	Emmetsburg
Bond, Ethel May	Sioux City
Brockway, James Madison	Iowa City
Cogswell, Charles H.	Cedar Rapids
Collins, Ed. R.	Bloomfield
Cradler, J. W.	Wapello
Curtis, Cora Gertrude	Allison
Davies, Alice R.	Iowa City
Davis, Florence Mabel	Sioux City
Devany, Mary	West Branch
Diamond, T. E.	Orange City
Dick, G. S.	Charles City
Donohoe, Anthony P.	Iowa City
Downey, Ezekiel H.	Memphis, Mo.
Dunham, Martha A.	Mason City
Dutton, James H.	Wheatland
Ensign, F. C.	Council Bluffs
Eitzgerald, James E.	Pierson
Fisher, Mayme T.	Plato
Focht, Lawrence G.	Wilton.
Fountain, Alice M.	Iowa City
Fracker, George Cutler	Iowa City
Gardner, Lucy F.	Iowa City
Ham, Ella M.	Sioux City
Hart, Sara L.	Iowa City
Hartley, Charlotte	Iowa City
Hastings, Jessie	Iowa City
Hatch, Eleanore	Iowa City
Hindman, Minnie H.	Iowa City
Hinman, Annie E.	Grand Forks, N. Dak.
Hodge, Lida	Indianola
Holson, Lulu Claire	Iowa City
Hussey, Lena Alice	Independence
Jarvis, Calvin N.	Iowa City
Jenner, Edwin A.	Indianola
Johnson, D. G.	Curlew
Johnson, Leora	Iowa City
Johnson, Kittie M.	Iowa City

STUDENTS—COLLEGE OF LIBERAL ARTS 409

Jones, Ella Jane	Williamsburg
Jones, Elizabeth	Iowa City
Joy, Florence Livingston	Iowa City
Kelley, Rita	Iowa City
Kephart, Milton L.	Iowa City
Kieruff, Anna Edwards	Montezuma
Laartz, C. H.	Atlantic
Lasheck, Adelaide	Iowa City
Lodwick, Deca	Iowa City
Lodwick, Libbie	Iowa City
Louis, John J.	Harlan
Marshall, Lloyd Earl	Davenport
May, Samuel Thomas	Clarion
McClain, Henry Griffiths	Iowa City
Meyerholz, Charles	Wapello
Miller, John William	Manning
Morris, Daisie M.	Charles City
Moffett, L. B.	Oelwein
Moulton, Helen Field	Iowa City
Norton, Florence	Wilton
Otto, Clementine	Iowa City
Overmeyer, J. F.	Parkersburg
Page, Clarence V.	Baldwin
Patterson, Cora D.	Emmetsburg
Patton, Fanny D.	Iowa City
Potter, Franklin Hazen	Iowa City
Paarman, J. H.	Wolcott
Porter, Clara	Washington
Porter, Monta	Albia
Preston, Gertrude E.	Iowa City
Rankin, M. Agnes	Iowa City
Rankin, Evangeline,	Iowa City
Reppert, Emma E.	Burlington
Rosser, Bert Paul	Troy
Ryan, Mary	Muscatine
Savage, Harry Harper	Denison
Schall, E. F.	Muscatine
Schiefelbein, Emil A.	Guttenberg
Sedgwick, Helen Morris	Iowa City
Sherbon, Amos H.	Iowa City
Shuck, May	Lamoni
Sims, Dellora	Hartley

GRADUATE STUDENTS

MATRICULATES FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

- Bartsch, Paul, B. S., '96; M. S., '99; Washington, D. C.
Conchology, Ornithology.
- Barrett, Albert Moore, B. A., '93; M. D., '95; Independence
Neuro-Pathology, Morphology.
- Cady, George Luther, B. A., '90, Olivet, Iowa City
Sociology, Philosophy.
- Conner, Jacob Elon, B. A., '91, Mt. Pleasant
Social and Pol. Philosophy, Economics, Political Science.
- Dorcas, Herbert Clifford, B. Ph., '95, Iowa City
History of Education, Psychology.
- Fitzpatrick, Thomas Jefferson, B. S., '93; M. S., '00; Iowa City
Botany, Geology.
- Fracker, George Cutler, B. Ph., '94; M. A., '00; Cedar Rapids
Psychology, Philosophy.
- Horack, Hugo Claude, LL. B., '99; B. Ph., '00; Iowa City
Political Science, Iowa History and Politics.
- Kephart, Milton Lawrence, ———* Shueyville
Sociology, Political Science.
- Mason, Oscar Henry Leonidas, B. A., '93; M. A., '94; Reinbeck
Sociology, Philosophy.
- Newberry, Frank John, Iowa City
M. D., '88, Chicago Hom. Med. Coll.; O. et A. Chir., '90, N.
Y. Oph. Coll.; M. D., '91, Ill. Med. Coll.; M. S., '93, Up-
per Iowa Univ.;
Psychology, Mental Pathology.
- Spurgeon, Floris J., B. S., '00, Iowa City
Political Science, Iowa History and Politics.

*Recommended for the Degree of Bachelor of Philosophy on January
6, 1901.

- Stookey, Stephen W., Cedar Rapids
B. S., '84, Coe; M. S. '87, Chicago;
Zoology, Botany.
- Williams, Mabel Clare, B. Ph., '99, Coralville
Psychology, Animal Morphology.
- Williams, Mark Wayne, B. A., '98, Iowa City.—15
History of Philosophy and Ethics, Psychology.

**MATRICULATES FOR THE DEGREE OF MASTER OF
ARTS**

- Adams, Wilber H., B. Ph., '00, Mendon, Ill.
Economics, U. S. History.
- Baker, Irving Wesley, B. Ph., '97; LL. B., '98. Chicago, Ill.
Political Philosophy, U. S. History.
- Baughman, Ruby, B. A., '00, Jefferson
Soc. Philosophy, U. S. History.
- Bowman, John Gabbert, B. A., '99, Lyons
Philosophy, English.
- Brasted, Fred, B. S., '98, Ida Grove
Sociology, Economics.
- Briggs, George Nathaniel, B. A., '97, Lamoni
Pedagogy, Politics.
- Brockway, Alice Rowena, Ph. B., '00, Iowa City
Politics, Economics.
- Brockway, Earle Bailey, B. A., '00, Garner
Philosophy, English.
- Brown, Florence Emily, B. Ph., '92, Marengo
Abn. Psychology, Animal Morphology, Physics.
- Brown, Samuel Joe, Ottumwa
Political Science, Economics.
- Butler, Maud Bernadetta, B. Ph., '96, Iowa City
French Revolution, French.
- Chamberlain, Park, B. Ph., '99, Anamosa
American History, Municipal Government.
- Cochrane, Thalia N., Washington, D. C.
English, German.
- Cooper, Clyde Barnes, B. A., '97, Nebraska, Lincoln, Neb.
English and French Criticism.

- Daum, Selma A., B. Ph., '00, West Liberty
Sociology, Philosophy.
- Davis, Arthur William, B. Sc., '93, Upper Iowa, Fonda
Economics, Comparative Const. Law.
- Dick, George Stuart, Charles City
B. Di., '87, St. Norm; B. S., 88; B. Ph., '97, Cornell College;
Psychology, Pedagogy, French.
- Dilley, Wesley Young, B. Ph., '97, Cornell Coll., Spencer
Political Science, Government.
- Dunlap, Clara Mae, B. S., '99, Lenox, Greeley
Politics, Sociology.
- Eaton, Ernest Theo., B. S., '97, Lenox; B. Ph., '99; Des Moines
History, Psychology.
- Eddy, Helen May, B. A., '00, Marengo
German, French.
- Egan, George William, Missouri Valley
Political Science, Sociology.
- Fellingham, John H., Marshalltown
M. Di., '94, Iowa State Normal; B. Ph., '00,
Economics, Philosophy.
- Fellows, Ora Mabel, B. Sc., '99, Upper Iowa, Iowa City
English Literature, History.
- Ferguson, Harry Jay, B. S., '96, Cornell College. Clarence
Government and Administration, History.
- Graff, Lulu A., B. S., '99, Iowa City
English Language and Literature, German, French.
- Greeley, Lennie Mabyn, B. Ph., '99, Iowa City
Constitutional History of United States, English History.
- Hanks, John, Ellensburg, Wash.
B. D., '92, Garrett Bib. Inst.; B. A., '97;
Constitutional Law, History.
- Hatch, Eleanore, B. A., '98, Iowa City
English Literature, English Language.
- Hawk, Ira Tapper, B. A., '99, Winterset
Sociology, Philosophy.
- Hayward, Roy Stanton, B. Ph., '98, Cornell College; Davenport
Politics, Economics.

Hearst, Mamie Frances, M. Di., '92, Iowa State Normal; B. Ph., '99; English Literature, English Language.	Cedar Falls
Hensel, Blanche Alice, B. Ph., '93, Latin, Roman Antiquities.	Minneapolis
Hinman, Annie Evelyn, B. S., '91, English Literature, Pedagogy.	Grand Forks, No. Dak.
Howard, Libbie C., B. Ph., '99, Sociology, United States History.	Jefferson
Howe, Marian Adell, B. S., '91; M. D., '00; Experimental Psychology, Abnormal Psychology.	Des Moines
Hull, Elmer Clapp, B. Ph., '99, History, Politics.	Iowa City
Hunt, Percival, B. Di., '96; M. Di., '97, Iowa State Normal; B. A., '00; English Language, English Literature.	Cedar Falls
Jones, David, B. A., '00, Penn College, History, Political Science.	Oskaloosa
Jones, Lillian, B. Ph., '99, Sociology, English.	Iowa City
Louis, John J., B. Ph., '99, Sociology, Politics.	Harlan
McMillen, Peter A., B. A., '93, History, Politics.	Grinnell
Mason, Benjamin Allen, B. A., '96, Princeton, U. S. History, History of French Revolution.	Albia
Moulton, Mark Mills, B. A., '00, Sociology, History.	Maquoketa
Paine, Katherine, Latin, English.	Iowa City
Paxon, Susan, B. Ph., '91, Pedagogy, Latin.	Manchester
Pile, Mattie Mansfield, B. A. '97, Latin, English Literature.	Council Bluffs
Polk, Mary Emma, B. A., '00, English, History.	Winterset
Preston, Gertrude Elaine, B. Ph., '98, Mathematics, History of Philosophy.	Iowa City

Reever, William Henry, M. Di., '95, Iowa State Normal; B. Ph., '97; History, Political Economy.	Baldwin
Robinson, Alta Aileen, B. Ph., '00, English, Psychology.	Iowa City
Saam, John Gustave, B. S., '00, Lenox, Literature, History.	Lansing
Saam, Theodore J., B. A., '98, Lenox, Literature, History.	Lansing
Sams, Elbert Elton, B. Ph., '97, Nebr. Wesleyan, Friend, Neb. Political Science, History.	
Sayers, Samuel Jefferson, B. Ph., '97, U. S. History, Political Science.	Jefferson
Schiefelbein, Emil August, B. S., '96, Economics, History.	Guttenberg
Shaffer, Nina Rebecca, B. Ph., '99, English, Latin.	Iowa City
Sharpe, James Joseph, B. A., '98, Political Science, History of Philosophy.	Oxford
Sharpe, Mrs. Lillian Ehret, B. Ph., '99, History of Philosophy, Political Science.	Oxford
Simonton, Thomas Milton, B. Ph., '00, Sociology, Psychology.	Iowa City
Sloan, Sam Berkley, B. A., '99, Nebraska, English Literature, English Philology.	Logan
Smith, Charles Leonard, B. A., '91, Botany, History of Botany, German.	Iowa City
Smith, Tillman, B. Ph., '99, Pedagogy, Economics, Politics.	Leon
Stevenson, Samuel Kirkwood, B. Ph., '93, Sociology, Constitutional Law.	Iowa City
Stockwell, Steven Sandford, M. Di., '95, Iowa State Normal; B. Ph., '00; History of United States.	Waverly
Sturm, Frederic Bernard, B. A., '92, Michigan, German Literature, History.	Iowa City
Sweet, Earl Chapin, B. A., '99, Cornell College, Politics, Economics.	Delphos, Kan.

- Thomas, Simeon E., B. Ph., '98; Upper Iowa; Nora Springs**
Political Science, Iowa History and Politics, Sociology and
Political Philosophy.
- Watson, Joseph Otis, B. A., '98; M. A., Simpson, '96; Indianola**
Economics, History.
- Webber, Charles Albert, B. A., '00, Iowa City**
History, Economics.
- Weldy, Morton Eugene, Des Moines**
M. Di., '96, Iowa State Normal; B. A., '99;
English History, Philosophy.
- Williams, Charles Allyn, B. S., '99, Coralville**
Germanics, German History.
- Wise, George Chester, B. Ph., '00. Wilton Junction.—73**
Germanics, French.

**MATRICULATES FOR THE DEGREE OF MASTER OF
SCIENCE**

- Albert, Henry, B. S., '00, Reinbeck**
Pathology, Bacteriology, Botany.
- Beck, William Edmund, B. S., '00, Sioux City**
Mathematics, Physics.
- Blackmore, Ralph Davis, B. S., '99, Iowa City**
Organic Chemistry, Morphology.
- Bowersox, Eugene Clarence, B. S., '96, Chelan, Wash**
Mathematics, Pedagogy.
- Brink, Francis Newton, B. Ph., '99, Iowa City**
Quantitative Analysis, Qualitative Analysis.
- Cavanagh, Lucy Mary, B. S., '96, Iowa City**
Botany, Zoology.
- Clark, Whit H., B. S., '97, Rock Valley**
Mathematics, Pedagogy.
- Clearman, Hattie Marie, B. Ph., '00, Iowa City**
Botany, Geology.
- Dean, Ray Herbert, B. S., '99, Muscatine**
Pathology, Physiological Chemistry.
- Donohoe, Anthony Patrick, B. S., '99, Iowa City**
Chemistry, Philosophy.

Gibbs, George Sabin, B. S., '97, Physics.	Harlan
Hamilton, Arthur S., B. S., '94; M. D., '97, Pennsylvania; Abnormal Psychology, Speculative Zoology.	Independence
Harkness, Gordon Follette, B. S., '00, Pathology, Bacteriology, Chemistry.	Iowa City
Johnston, Oscar Percy, B. Ph., '97, Iowa College, Analytical Chemistry, Physiological Chemistry.	Van Cleave
Kemmerer, Theodore Wilbert, B. S., '00, Neuro-Pathology, Abnormal Psychology.	Eldridge
Lambert, John Joseph, B. Di., '96; M. Di., '97, Iowa State Normal; B. Ph., '99; Morphology, Geology.	Iowa City
Mosnat, H. Roy, B. Ph., '99, Glacial Geology, Artesian Wells in Iowa.	Belle Plaine
Mueller, Herman August, B. Ph., '99, Geology, Botany, Pedagogy.	Winterse
Myers Perry Cullen, B. S., '99, Diatoms of Iowa, Fossil Diatoms.	Iowa City
Rigg, George Burton, B. S., '96, Botany, Morphology.	Woodbine
Schoonover, George L., B. Ph., '00 Pleistocene Geology, Paleontology.	Anamosa
Seymour, Edith Maria, B. S., '99, Biology, Entomology.	Iowa City
Shimek, Bohumil, C. E., '83, Botany, History.	Iowa City
Sieg, Lee Paul, B. S., '00, Physics, Mathematics.	Marshalltown
Stromsten, Frank Albert, B. S., '92, Morphology, Botany, Geology.	Corydon
Tamura, Satoru Tetsu, B. S., '00, Simpson, Mathematics, Astronomy.	Iowa City
Weld, LeRoy Dougherty, B. S., '99, Physics, Mathematics.	Clinton
Werts, Charles Martel, B. S., '00, Histology, Physiological Chemistry	Russell.—23

**MATRICULANT FOR THE DEGREE OF ELECTRICAL
ENGINEER**

Willis, Bernard Darwin, B. S. in E. E., '97, Chicago, Ill.—1
Telephone Engineering.

**GRADUATE STUDENTS NOT CANDIDATES FOR
DEGREES**

Allin, Norra, B. Ph., '97, English, French.	Iowa City
Bailey, Charles Henry, B. S. in C. E., '85, Child Study.	Iowa City
Biggs, Mrs. Eleanor Startzman, B. Ph., '87; M. A., '99; English.	Iowa City
Brown, Charles Sumner, B. A., '90; M. A., '93, Rochester; English.	Iowa City
Corlett, Jessie May, B. Ph., '97, Chemistry, Physics.	Iowa City
Dey, Ann Hull, B. Ph., '99, Zoology.	Iowa City
Ely, Mrs. Mary Barber, B. Ph., '90, French.	Manila, P. I.
Ende, August von, B. S., '97, Psychology.	Burlington
Ferson, Merton Leroy, B. Ph., '00, Public Speaking, History.	Ferndale
Freeman, May Agnes, B. Ph., '97; M. A., '98; English.	Iowa City
Hughes, Louise Elizabeth, B. Ph., '78; M. A., '81; B. A., '99; Greek.	Iowa City
Hutchinson, Sarah Delia, B. Ph., '83; M. A., '88; Greek Sculpture.	Iowa City
Kindall, Joseph William, B. A., '00, Public Speaking.	Onawa
Lambert, Byron James, B. Ph., '00, Engineering.	Cedar Falls

STUDENTS—GRADUATE COLLEGE 419

Lodwick, Libbie, B. Ph., '98; M. A., '00; Philosophy, Psychology.	Iowa City
MacLaren, William Gardner, B. A. Iowa College, United States History.	Galva
Mordoff, Carrie Ella, B. Ph., '84; M. A., '87; English Criticism.	Iowa City
Patrick, Mrs. Maud Lyall, B. L., '86, Minnesota, Greek Sculpture.	Iowa City
Patton, Fannie Dodder, B. Ph., '92, Latin.	Iowa City
Remley, James Edward, B. Ph., '00, Political Science.	Anamosa
Roach, Lorin J., B. Ph., '00, Logic, Debate, English.	Rock Rapids
Rogers, Frances Louise, B. A., '88, Philosophy, Spanish.	Iowa City
Rogers, Mrs. Kate Brainerd, B. Di., '62, Greek Sculpture, French History.	Iowa City
Seashore, Mrs. Roberata Holmes, B. Ph., '91; M. A., '93; Greek Sculpture.	Iowa City
Seymour, Sarah Libbie, B. A., '97; M. A., '00; Geology, Entomology.	Iowa City
Sherwood, Mrs. Elizabeth Lewis, B. A., '81, English Literature.	Iowa City
Smith, Mrs. Grace Partridge, B. A., '91, Greek Sculpture.	Iowa City
Sterling, Mrs. Jessie Bowen, B. Di., '61, English, Greek Sculpture.	Iowa City
Troth, Mira, B. A., '88, English.	Iowa City
Wilcox, Mrs. Mary DeVol, B. A., '88, Smith, Speculative Zoology.	Iowa City
Williams, Bertha Alice, B. Ph., '88, French.	Iowa City.—81
TOTAL,	<hr/> 148

COLLEGE OF LAW

GRADUATES OF 1900

Ainsworth, Alburn Stevens	Hartman, Harry Hale
Anderson, Oscar Elwood	Hebel, David Andrew
Baer, Bernice Worth, B. D.	Hendrick, Burt
Baker, Horace William	Heninger, Charles Clayburn
Bauder, Alphus Germaine, B. S.	Hirsch, Edward Louis
Birdsall, Maurice Frederick	Holsteen, Frederick S., B. Ph.
Bittle, T. W.	Horack, Hugo Claude, B. Ph.
Blakely, Ira Thomas	Hornibrook, Edward John
Boardman, Homer Norman	Hourihan, James
Borman, August Henry	Howard, John Raymond
Bowie, Archie G.	Hubbard, Alice Elizabeth
Branjord, Berent Marlinus	Hughes, Clinton Boardman
Brant, Melbon Roscoe	Hyde, Arthur Mastick, B. A.
Burnstedt, John Edward	Jebens, Henry Hans
Burt, Alfred James, B. Ph.	Johnson, Karl Johan
Byrnes, James	Kammerer, John
Caswell, Charles Clyde	Lutz, Walter Blackburn, B. A.
Clark, Jesse Wilbur, M. S.	Macdonald, Hilda
Clark, Roy Perry, B. S.	McCormick, John Bernard, B.A.
Clearman, Lewis Charles Wade	McCormick, William A.
Clinite, Franklin Elmer	McElroy, Walter Hamilton
Crary, Charles Judson	McGee, John William Bolton
Crary, Frederic Willis	McManus, Vincent Patrick
Crossley, James J., M. A., Ph. D.	Metcalf, Orin J.
Downing, William Henry	Moon, Charles Hovey
Elgin, Charles Henry	Moorhouse, Robert J., B. A.
Fowler, John Charles	Murphy, Jeremiah Bartholomew
Frailey, Joseph Robinson, B.Ph.	Okey, Frank Clifford, B. A.
Gray, Harry Blanchard	Otto, Ralph, B. A.
Hagander, Oscar William	Parry, Alexander Clem
Hammond, Frank Earl	Peregrine, James Hanna, B. A.
Hampson, Frank Christopher	Reiley, Robert LeRoy, B. A.
Hanley, Charles Parmer	Reynolds, Hal Reede

Rhode, Carl Adolph	Thomas, Benjamin F., B. Ph.
Rule, Arthur Lynnwood	Thompson, J. McCandless, B. S.
Ruymann, Adolf	True, George Clifford
Sailor, George Durell, B. S.	Walsh, Eugene John
Scully, George William	Wessels, Arthur Lewis, B. S.
Shepard, Hugh Hurst, B. Ph.	Wessels, Alden Van Epps
Snider, William Philip	Wheelock, Theodore Morris
Stevens, Frederick LeRoy	Whitmer, Albert Roy
Sullivan, John Lawrence	Wilcox, John Clinton
Swisher, Benjamin F., B. Ph.	Williams, Fred Almor, B. Ph.
Taylor, Herbert Edward, B. Ph.	Wilson, William Bruce
Teter, Lorenzo Dow	Witt, Fred Henry

SENIORS

Abernethy, Herbert Alonzo B. A., '99, Chicago.	Osage.
Allen, Robert Emmet	Independence.
Ballou, Benning Edward	Larrabee.
Balluff, Walter Martin	Davenport.
Barker, Arthur James, B. Ph., '98	Cresco.
Bartlett, Herbert Gallup	Orchard.
Beckman, Stephen Joseph	Burlington.
Bender, David Wilson	Oakland.
Berry, Edmund Charles	Livermore.
Blackburn, Newman Arthur	Cresco.
Blanchard, Emir E. B. Ph., Farmington College	Iowa City.
Bossert, Burt Ellis	Jefferson.
Bowen, Charley Edgar, B. A., '99	Cedar Falls.
Bradley, Charles Clark,	Council Bluffs.
Breen, James	Cummings.
Bridenstine, Burton Vance	North Liberty.
Brown, Arnold Elmer	Osage.
Brown, Roy Chase	Sigourney.
Brown, Samuel Joe, B. A., '98	Ottumwa.
Burton, Albert Johnson	Atlantic.
Carr, Fred Parker	Des Moines.
Cotant, Charles Thomas	Whitemore.
Crans, Norman Wallace	Davenport.
Dahms, Edward John	Davenport.
Daum, Philip Hugh	Davenport.

Davies, Edward Patrick	Floris.
Davis, Arthur William	Fonda.
B. Sc., '98 Upper Iowa.	
Davis, Frank T.	Mt. Vernon.
Dayton, Charles Houghton, B. S., '82.	Iowa City.
Dennis, William	Onawa.
B. Ph., '00, Cornell College.	
Dewey, Charles Almon	Washington.
Donegan, Maurice Francis	Davenport.
B. A., '95, Creighton University; M. A., '98, Ph. D., '99, George- town University.	
Downing, Harold Bliss	Wellman.
Eby, Moray Leon, B. S., '99	Adair.
Edson, Willis Charles	Blaine.
B. Sc., '98, Iowa State College.	
Egan, George William, B. A., '00	Missouri Valley.
Elliott, Jay Edward	Rock Island, Ill.
Engle, Bert Jacob	Newton.
Feely, Guy Anthony	Waterloo.
Felton, Royal Bradley	Neola.
Ferguson, Harry Jay	Clarence.
B. S., Cornell College.	
Ferson, Merton LeRoy B. Ph., '00	Frendale.
Fletcher, George H., B. Ph., '00	Cedar Rapids.
Flynn, James Edward	Minburn.
Frank, Walter Clyde	Red Oak.
Genung, Clyde Thompson	Glenwood.
Gilmore, Jesse Melford	Osage.
Gleason, Fred Brockway	Davenport.
Glenn, Jacob Frank	Denison.
Grant, Franklin Ferdinand	Ida Grove.
Hall, Howard Morgan	Harlan.
Hamilton, Margaret Irving	New Haven, Conn.
Harding, Benjamin Philip	Geneseo, Ill.
Harvey, James Francis	Leon.
Hays, Charles Rolvin	Missouri Valley.
Hayward, Roy Stanton	Davenport.
B. Ph., Cornell College.	
Healy, Patrick Henry	Metz.
Heimbeck, Adolph James	Burlington.
Helmer, Charles C.	Lisbon.
Henderson, Frank Perrin	Indianola.
B. Ph., '99, Simpson.	
Henderson, Lewis Wilford	Sibley.

Hickman, James Harlan	Chariton.
Hildebrand, John Henry	Waterloo.
Hinchon, William David	Algona.
Holman, James Royal	Rockwell.
Holmes, William Harrison	Ellsworth, Me.
Holt, John Wesley, B. A., '99	Swedesburg.
Honeywell, Henry Jesse	Williamstown.
B. S., '96, Upper Iowa.	
Hospers, John W.	Orange City.
Humphrey, Charles William, B. Ph.	Winterset.
Jackson, Ernest Andrew	Des Moines.
Johnson, David Nicholas	Talleyrand.
Johnson, Julius Hougen	Addison.
B. A., '00, Minnesota.	
Kaiser, Julius Herman	National.
Kelley, Winfred Bishop	Lamoni.
B. A., Graceland College.	
Kindall, Joseph William, B. A., '00.	Onawa.
Kingland, Thomas Andrew	Forest City.
Klahn, Charles	Denison.
Klincker, Peter John, B. Ph., '00	Denison.
Kridelbaugh, Joe Wilford	Chariton.
Kugler, Arthur Alexander	Stacyville.
Lee, Leslie Parvin, B. Ph., '99.	Iowa City.
Lovell, Guye E.	Garner.
McBurney, James Wayland	Churdan.
McCormick, James LeRoy	Tipton.
McDonald, William Joseph	Vinton.
Manatt, Guy Sterling	Grinnell.
Marshall, Lloyd Earl	Davenport.
Mason, Benjamin Allen	Albia.
B. A., '96, Princeton	
Mason, Eugene Irving	Brooklyn.
Mason, Ralph Taylor	Albia.
Miller, Nelson	Remsen.
Moore, William Franklin	Dale.
Morse, James Warren	Osage.
Moulton, Mark Mills, B. A., '00	Maquoketa.
Murphy, Edward Andrews	Vinton.
Murtagh, James Cyrus	Shell Rock.
Nelson, John Silford, B. Ph., '99	Madrid.
Niccolls, George Howard	Wapello.
Nickerson, Roy A.	Maquoketa.

Nies, Frank Knapp	Marble Rock.
Noland, Harry Boardman	Cedar Falls.
Ogden, Raymond Davis, B. Ph., '00	Williamsburg.
Otis, Edmund Rufus	Monona.
Patterson, James Grant, B. Ph., '99	Oskaloosa.
Petersen, Walter Herman	Davenport.
Petrovitsky, Charles George	Cedar Rapids.
Phelan, Daniel Edward	Bristol.
Powell, Thomas Brundige B. A., '99, Denison.	Cedar Rapids.
Preston, Fred Alexis	Grinnell.
Randall, McKercher John B. E., '94, Cent. Pa. Coll.; B. A., '99, Cornell College.	Lisbon.
Rankin, Wiley Strange	Mason City.
Redden, Will Lester	Danbury.
Regan, John Peter	Waukon.
Remley, James Edward	Anamosa.
Robish, Willis Herbert B. S., '99, Upper Iowa.	Sumner.
Roedell, Robert Percy	Dubuque.
Rue, Lars O.	Ridgeway.
Sargent, Frederick Wesley	Sioux City.
Saunders, Herbert Clifford, B. Ph., '00	Manilla.
Simonton, Thomas Milton, B. Ph., '00	Iowa City.
Smith, Arthur DeWitt	DeSoto.
Smith, Frank Charles	New Hampton.
Soesbe, Clarence William	Greene.
Springer, William James, B. Ph., '00	Decatur City.
Stevenson, Samuel Kirkwood, B. Ph., '93	Iowa City.
Stover, George Elmer, B. Ph., '93	Iowa City.
Stratford, Arthur Avon B. Ph., '99, Coe College.	Cedar Rapids.
Struble, Guy Treat	LeMars.
Suhr, John Christian	West Side.
Sweet, Earl Chapin B. A., '99, Cornell College.	Delphos, Kan.
Tamisiea, Robert Shannon Franklin	Waverly.
Vaughn, Philip Timothy	Ft. Dodge.
Warner, Joseph Sylvester	Leon.
Warner, Loren Ashley	Iowa City.
Weaver, Walter LeRoy	Iowa Falls.
Wells, Frank, B. Ph., '00.	Miles.
Wells, Leonard Alva	Reasonor.

Willet, William S., B. A., '99.	Tama.
Williams, LaMont Abner	Shenandoah.
Wissler, Edwin Arthur	Atlantic.
Woodbridge, Chandler	Central City.
Wright, Herbert Richard	Marshalltown.
Yaley, Horace J.	Burlington.
Young, Lafayette, Jr.	Des Moines.—145.
B. Ph., '00, Michigan.	

SECOND YEAR

Cotton, Richard Lee	Davenport
B. Ph., '97, Bentonville College, Arkansas.	
Johnson, Eugene Gustave	Decorah.
B. A., '98, Luther College.	
Murray, George Herman	Massena.
Nelson, George William	Davenport.
Rippey, Arthur Gordon	Winterset.
Schoonover, George L., B. Ph., '95.	Anamosa.
Stevenson, John Ogilvie	Waterloo— 7.

FIRST YEAR

Ahern, Timothy Joseph	Calmar.
Allbee, Gustavus, Jr.	Pleasant Prairie.
Artherholt, Luther Garfield	Shell Rock.
Arthur, Edwin Calhoun	Little Sioux.
Asthalter, Harold Charles	Muscatine.
Baird, Herbert John	DeWitt.
Baker, Mark Emery	Iowa City.
Ball, George Washington, Jr.	Iowa City.
Bannister, Robert James	Ottumwa.
Bennett, William Claude	Waterloo.
Birss, George Alexander	Tipton.
Bock, William James	Lake Park
Bordner, Richard L.	Jesup.
Bradley, Clifford E.	Rock Rapids.
Brose, Frank Verne	Ocheyedan.
Calkins, Guy Smith	Iowa City.
Chew, Elmer Leonard	What Cheer.
Clegg, Samuel Harvey	Ainsworth.
Converse, Charles Crozat	Cresco.
Cox, Clifford Vernard	Newton.
Crary, Stephen Arnold	Boone.
Crockett, Frank Walford	Eldora.

Crowell, Charles Rollins	Fremont, Neb.
Crum, William Edwin	Bedford.
Delavan, George Edwin, Jr.	Estherville.
Dormoy, David Andrew	Algona.
Dunbar, David Owen	Center Point.
	B. A., '95, Columbia University.
Ellis, Dias Henry	Motor.
	B. S., '00, Penn College.
Ely, Asher W.	Iowa City.
Engelke, Charles Rufus	Sidney.
Farquhar, S. Walter	Ida Grove.
Feely, Elmer Frank	Waterloo.
Fesenbeck, John Alvin	Danbury.
Fitzpatrick, Miles Joseph	Ft. Dodge.
Fleming, William Ebenezer	Sabula.
	B. S., '98, Upper Iowa.
Gifford, Judge Herbert Sheldon	Nevada.
Gillespie, John Leonard	Nevada.
	B. S. in E. E., '99, Iowa State College.
Gurley, Zenas Robinson	Anamosa.
Hanson, William Patrick	Williamsburg.
Harned, Luther Martin	Lone Tree.
Hart, Irving Harlow	Allison.
	B. A., '98, Iowa College.
Heald, Francis Alfred	Cresco.
Heminger, Amos Lincoln	Keosauqua.
Higbee, Herbert George	Fairbank.
Holmes, John Edward	Iowa City.
Howell, George Key	Davis City.
Hull, Elmer Clapp	Iowa City.
Hunter, Charles Randall	Exira.
Hunter, John McCrary Griggs	Exira.
Huttenlocher, Forest	Des Moines.
Jackson, Thomas Sunter	Fayette.
	B. S., '00, Upper Iowa.
Johnson, Perry Spencer	Decorah.
	B. A., '99, Luther College.
Jones, Peter Henry	Manning.
Kelso, Charles David	Corydon.
Kenyon, Earl Dudley	Onawa.
Kirchner, Moreau Philip	Peterson.
Kitterman, John Taylor	Rock Rapids.
Knapp, William Proctor	Grinnell.

Krøger, Emil Tease	Princeton.
Kuck, Orlando Adolph	Charles City.
Lambert, Flavius Webb	Mt. Pleasant.
B. A., '97, Iowa Wesleyan.	
Lange, Louie Edgar	Laurens.
Liebbe, Carl Herman	Des Moines.
McClain, Donald	Iowa City.
McConnell, Arthur Harris	Iowa City.
McCulla, Walter Philo	Sutherland.
McCutchen, Fred Clifton	Iowa City.
McElhinney, Roscoe Conkling	Dysart.
McElroy, Isaac Erwin	Pleasant Prairie.
McSwiggin, Edward Alexander	Williamsburg.
MacLaren, William Gardner	Galva.
B. A., '98, Iowa College.	
Maguire, Daniel Eugene	East Dubuque, Ill.
Martin, Charles Clayton	Nevada.
Mather, Carl Henry	Springdale.
B. S., '00, Penn College.	
Medin, John Theodore	Kensett.
Merriau, Fred Simmons	Marble Rock.
Moffitt, James Sedan	Olin.
Mowry, Ross Rutledge	Baxter.
Negus, Henry	Iowa City.
Oakes, William Thomas	Clinton.
Packard, Walter Steel	Marshalltown.
Pomeroy, William Henry	Shelby.
Putnam, Clyde C.	Iowa City.
Ridle, William Bertram	Perry.
Risk, Loren	Stanley.
Roach, Lorin J., B. Ph., '00	Rock Rapids.
Roebuck, Mrs. Edith May	Iowa City.
Rosenstone, Bertram W.	Moline, Ill.
Roth, Homer Arthur	Mt. Pleasant.
Russell, Earl Willard	Adel.
Scholz, Charles Emil	Guttenburg.
Severin, Carl Frederick	Cedar Falls.
Sherman, Fred	Rolfe.
Shorett, Judson Willard	Earling.
Sieg, George Lawrence, B. S., '00	Davenport.
Simmons, Richard Sutton	Cedar Rapids.
Skinner, Bert Sydney	Moline, Ill.
Smith, Thomas Corwin	Logan.

Sullivan, Eugene John	Marengo.
Swift, John Loras	Riverside.
Thompson, Herbert Garfield	Muscatine.
Thompson, Ralph Ulysses	Muscatine.
Thurston, Lloyd Leonard	Osceola.
Tourgee, John Birney	Arthur.
Van der Ploeg, William Garfield	Otley.
Van Ness, Edwin Jones	Williams.
Walker, James Henry	Denison.
Walker, Robert Duncan	Denison.
Waterman, William Thomas	Davenport.
B. Ph., '00, Iowa College.	
Wenner, Edward Jackson	Garrison.
Wilcox, William Henry	Rolfe.
Wilkinson, Philip Read	Winterset.
Wilson, Carlton Charles	Washington.
Yates, Edward Gilbert, B. Ph.	Williamsburg—114

SPECIAL STUDENT

Coen, Walter Scott	Ottumwa.
Orvis, Elmer Victor	Oskaloosa.
Owen, Lenton Warren	Spirit Lake—3.

SUMMARY

Seniors,	-	-	-	-	-	145
Second year,	-	-	-	-	-	7
First year,	-	-	-	-	-	114
Special,	-	-	-	-	-	3
Total,	-	-	-	-	-	269

THE COLLEGE OF MEDICINE

GRADUATES 1901

Beach, Lena Alice	Kemmerer, Theodore Wilbert
Beach, Melville Augustus	Krejsa, Oldrich
Belsheim, Andrew Gilbert	Lespinasse, Adolph F. H., de
Blackmore, Ralph Davis	Logan, Fred Wallace
Bullock, William Elmer	Logan, Jay Augustus
Cantwell, John Dalzell	Lowry, James David
Chapman, Horace Ray	Middleton, George McClelland
Cretzmeyer, Charles H.	Morgan, Charles Henry
Daly, Maud Alice	Morton, Lewis Burrows
Dotson, Eli E., Jr.	Peterson, August John
Fitzpatrick, Dennis Francis	Pringle, Jesse Alva
Frank, Carl Schurz	Puleston, Fred
Gifford, Andrew James	Reiter, Alfred Ephraim
Harlan, Charles Davis	Sailor, Edwin Allen
Harold, Arthur William	Smith, Elizabeth
Hender, Alfred Baker	VanGorden, Jesse Leland
Hobbs, Samuel Warren	Wescott, LeRoy Anderson.
Jarvis, Fred Jackson	

SENIORS

Beach, Lena Alice	Carroll.
Beach, Melville Augustus	Carroll.
Belsheim, Andrew Gilbert	Leland.
Blackmore, Ralph Davis, B. S., '99	Iowa City.
Bullock, William Elmer	Shelby.
Cantwell, John Dalzell	Davenport.
Chapman, Horace Ray	Elwood.
Cretzmeyer, Charles H.	Waverly.
Daly, Maud Alice	Troy.
Dotson, Eli E., Jr.	Colfax.
Fitzpatrick, Dennis Francis	Iowa City.
Frank, Carl Schurz	Iowa City.
Gifford, Andrew James	Miller, So. Dak.

Harlan, Charles Davis	What Cheer.
Harold, Arthur William	Ackley.
Hender, Alfred Baker	Iowa City.
Hobbs, Samuel Warren, Ph. B., '97	Storm Lake.
Jarvis, Fred Jackson	Rose Hill.
Kemmerer, Theodore Wilbert, B. S., '00	Eldridge.
Krejsa, Oldrich	Cedar Rapids.
Lespinasse, Adolph Frederick Henry de	Orange City.
Logan, Fred Wallace	Spencer.
Logan, Jay Augustus	Bath, Ill.
Lowry, James David	Ft. Dodge.
Middleton, George McClelland	Davenport.
Morgan, Charles Henry	Iowa City.
Morton, Lewis Burrows	Iowa Falls.
Oren, Samuel Leo,	Lanark, Ill.
M. D., '99, Barnes Medical College.	
Peterson, August John	Kensett.
Pringle, Jesse Alva	Bussey.
Puleston, Fred	Anamosa.
Reiter, Alfred Ephraim	Burlington.
Sailor, Edwin Allen	Lisbon.
Smith, Elizabeth	Aurora.
VanGorden, Jesse Leland	Emmetsburg.
Wescott, LeRoy Anderson,	Gladbrook—36.
B. Di., '92; M. Di., '94, Iowa State Normal.	

JUNIORS

Albert, Henry, B. S., '00	Reinbeck.
Anderson, Harry Nathaniel	Scranton.
Baer, Thomas Horatio	Ottumwa.
Chase, William Bronk, B. S.	Des Moines.
Christensen, Christen Jensen	Garwin.
Clark, Alice May	McGregor.
Cooper, Jay Clark	Red Oak.
Day, William Elton	Dumont.
Dean, Ray Herbert, B. S., '99	Muscatine.
Dingman, Marshal Edwin	Urbana.
Donohoe, Anthony Patrick, B. S., '00	Iowa City.
Eaton, William Hammond, B. S., '00	Iowa City.
Free, Samuel Pratt	Rippey.
Freligh, Clarence Neil, B. S., '99	Elkhorn, Wis.

Fritschel, Godfrey Constantine	Waverly.
Graham, Dell Ewing	DeWitt.
Gray, John Franklin	Albia.
Greear, Clabe Baker	Five Oaks, Va.
Guldner, Ludwig Frederick	Davenport.
Harkness, Gordon Follette, B. S., '00	Iowa City.
Heinen, William Clark	Iowa Falls.
Helmey, Carl Theodore	Canton, So. Dak.
Henninger, Louis, Jr.	Council Bluffs.
Hibbs, Fred Valentine	Lake City.
Jones, Henry R.	Lawler.
Little, Ernest Hartley	Minden.
Lundvick, Arthur Wesley	Harcourt.
McAllister, Fred J.	Tipton.
Maresh, George	Iowa City.
Meigs, Benjamin Lyle	Malcolm.
Nervig, Isaac Eugene	Thor.
Overmass, Sam Edward	Iowa City.
Patterson, William Madison	Farmer City, Ill.
Pheasant, Lun Ray	Osceola, Neb.
Phillips, Albin Blackmore	Fertile.
Reppert, Lyell	Muscatine.
Scarborough, Bert Vergil	Grand Junction.
Schooley, Alfred Heaten	Winfield.
Starbuck, Thomas Davidson	Davenport.
Steelsmith, Daniel Clarence	Conrad.
Tamisiea, James Hugh	Missouri Valley.
Taylor, John Lealand	Dover, Ill.
Tilden, William Clark	Ames.
	B. S., '97, Iowa State College.
Wells, James Harlan	Iowa City.
Werts, Charles Martel, B. S., '00	Russell.
Wiedow, Henry	Iowa City—46.

SOPHOMORES

Ainsworth, Adelaide Lorena	Ft. Dodge.
Allen, Lloyd Raymond	Russell.
Angus, Haney Adelbert, B. S., '00	Algona.
Appel, Fred Lyons,	Muscatine.
Beam, Hugh Atlee	Moline, Ill.
Bear, Wilson Grant,	Orangeville.
	B. S., '00, Western College.

Bice, Gerald Roy	Troy Mills.
Birney, Varillas Clenthos, Jr.	Greene.
Bowen, Albert Sidney	Waukon.
Bowser, William Francis, B. A., '98, Parsons College.	Muscatine.
Braden, Austin Lynn	Mediapolis.
Briggs, Francis William	Oskaloosa.
Buckmaster, Raleigh Ankeny	Jesup.
Burns, Thomas John	Manchester.
Bushnell, William Francis, B. S.	Cedar Rapids.
Carle, Frank Clifford	Urbana.
Carlson, Frank Gilbert	Hampton.
Cathcart, John Watson	Mason City.
Chamberlain, Ben H.	Wyoming.
Childs, Hal Augustan, B. S., '00	Lenox.
Creswell, William L.	Reinbeck.
Cross, Frank Wallace	Leon.
Crowley, Jay M.	Galva.
Downing, Leroy Morgan	Wellman.
Dulin, John Albert	Webster.
Frink, Raymond P.	Cushing.
Fullarton, William Russell	Dubuque.
Goodwin, Charles Lucien	Vinton.
Graham, Joseph Aloysius	Dubuque.
Grothaus, Tarana Johanna	Buffalo Center.
Hetzel, Clarence Charles	Avoca.
Hoffman, Coleman Lovejoy	LeMoyne, Ill.
Hooker, Ira Sidney	Waverly.
Howland, Charles Francis	Toledo.
Huston, Samuel Wesley	Wyman.
Ingham, George Meek	Wilton Junction.
Jackson, John Edward	Marion.
Jeffers, George Newton	Hanover, Ill.
Jones, Henry Durst	Battle Creek.
Jones, Walter William	Eddyville.
King, Oran West	Vinton.
Kruchek, Stephen	Spillville.
Lambert, Charles Irwin, M. Di., Iowa State Normal.	Cedar Falls.
Lantz, Ezra Douglass, B. A., Franklin & Marshall.	Lancaster, Pa.
Lyon, Paul Tiffany	Dexter.

McCall, Harry Ernest	Berkeley.
McClure, Ernest Covey	Oskaloosa.
McKean, Alex. C.	Scotch Grove
Maxin, John Walter	Evans.
Meehan, Joseph James	Denison.
Meyer, Harry Edward	Hampton.
Meyers, Jacob Franklin	Lisbon.
Middleton, Edward Duncan	Davenport.
Moon, Roy	Bricker.
Mueller, Emil Frederick	Dyersville.
Murchison, Kenneth	Griswold.
Murphy, Thomas William	Lawler.
Murphy, William Linett	Long Grove.
Nelson, Fred Lawrence	Leando.
Nelson, Henry Eugene	Decorah.
Newman, Fred McPherson	Clarksville.
Nims, Edward Arthur	Boone.
Norris, Frank Ambrose	Rock Valley.
O'Connor, Maurice Joseph	Independence.
Oredson, Olef Andrew	St. James, Minn.
Porter, Roy Samuel	Moline, Ill.
Randall, Andrew Leroy	Denison.
Redmond, John Patrick	Dysart.
Ritchey, Romney Moore	Portage, Wis.
Robinson, Reuben Artman	West Union.
Schenck, Daniel Scott	Iowa City.
Schoenjahn, Walter Leroy	West Side.
Scholten, Dirk John,	Alton.
	B. S., '00, Iowa State College.
Shaffer, Carl John,	Centerville.
	M. Di., '97, Iowa State Normal.
Shiley, George Francis	Missouri Valley.
Smead, Leslie Levant	Newton.
Sparks, Francis Rufus	Iowa City.
Todd, Mrs. Lou Andree	Springdale.
Viers, John Wesley	Burlington.
Wagner, William Christian	Vinton.
Warner, Herbert W.	Iowa City.
Washburn, Frank Augustus,	Mt. Pleasant.
	B. A., '96, Battle Creek, Mich.
Welsh, Fred Edwin,	Boone.
	B. A., '97, Northwestern University.

Welsh, Thomas William	Iowa City.
West, George Humphrey, B. Sc., '99, South Dakota Agricultural College.	Iowa City.
Whitaker, Ellis John, B. A., '96	Davenport.
Wolfe, Channing Elmer	Panora.
Young, James Myron	Center Junction—98.

FRESHMEN

Allen, Roy William	Marshalltown.
Baldwin, Clare C.	New Sharon.
Baldwin, Daniel	Brandon.
Black, Robert Alfred	Wyman.
Blythe, Edward Ellsworth	Williamsburg.
Boots, Frederic Warner	Linden.
Bowman, Howard Edgar	Iowa City.
Brown, Florence Emily, Ph. B., '92	Marengo.
Brown, Francis Henry	Elwood.
Brush, Edward Lewis	Ashland, Neb.
Chambers, Samuel Laward	Cedar Rapids.
Colburn, William Orlin	Dexter.
Collins, Roy A. Miles	Eldora.
Coombs, Fred Hamilton	Hanover, Ill.
Coulthard, George Harry	California.
Crane, Edward Harrison	Battle Creek.
Crane, Eudell Thomas	Battle Creek.
Cressler, Frank Ernest	Scranton.
Danell, Karl August, B. A., '00, Augustana.	Rock Island, Ill.
Day, Archie Loraine	Mt. Pleasant.
Dillon, Bert John	Strawberry Point.
Dunn, James	Clinton.
Dunn, John Edward	East Orange, N. J.
Eade, John Laity	Muscatine.
Edmonds, William Frank	Dysart.
Emmerson, William Stanford	Port Perry, Ont.
Evans, Frank Butler	Arion.
Ferry, Herbert Works	Geneseo, Ill.
Fitz, Joseph Hamilton	Panora.
Gannaway, Charles Robertson	Panora.
Gordon, William Null	Traer.

Gray, George Henry	West Union.
Gray, Oscar Sylvester	West Union.
Hagan, John	Independence.
Hagan, Martin	Independence.
Hallinan, Edward	Clinton.
Hearne, Charles Alfred	Mt. Pleasant.
Hearst, George Edward	Cedar Falls.
Herbert, Charles Leon Tine	Adair.
Hoover, Alden Robbins	Muscatine.
Houser, Cass Thomas	Urbana.
Irwin, Perle Clifton	Fairfield.
Jacoby, William Kaul	Wells, Minn.
Jennings, James Jurel	Oskaloosa.
Jones, Harry Jacob	Wellman.
Karrer, Fred William	Osceola, Neb.
Klein, Adam Raymond	Iowa City.
Krause, Charles Schutz	Garwin.
Kulp, Ray Ranney	Davenport.
Lewis, William John	Dexter.
Lynch, Robert James	Eagle Grove.
Lyon, John Dexter	Dexter.
McDermott, Peter John	Iowa City.
Martin, Thomas Edwin	West Bend.
Martindale, William Harvey	Dayton.
Molloy, Edward	Parkersburg.
Moore, Albert Alexander	Reinbeck.
Moore, Dudley A.	Urbana.
Murphy, John Campbell	Long Grove.
Naftzger, Jesse Blaine	West Liberty.
Nolte, Willis Clever	Dexter.
O'Loughlin, Daniel Joseph	Ackley.
Osborne, Robert Prettyman	Davenport.
Ostling, Carl August	Des Moines.
Overholt Roscoe Earl	Columbus Junction.
Pease, Herbert	Collins.
Peters, Fletcher Edward	Dunlap.
Redmond, Thomas Michael	Dysart.
Reinemund, Charles Adam	Muscatine.
Robb, Robert Worth	Linton.
Rosenblatt, Fritz	Bayard.
Rust, Emery Andrew	Newell.
Sauerbry, Frank Carl	Strawberry Point.

Schroeder, Peter Herman	Iowa City.
Schug, George	Strawberry Point.
Sebern, Richard Clyde	Lake City.
Shahan, Richard Franklin	Avery.
Shearer, William Alexander	Clarence.
Sherman, Benjamin Harry	Rolfe.
Siberts, Frank Leslie	Mt. Pleasant.
Smeltzer, Cora Huldah	Washington.
Smith, Charles Leonard, B. A., '91	Iowa City.
Smith, William Francis	Jewell Junction.
Souders, John Cloyd	Rock Island, Ill.
Stockdale, Charles Paul	Iowa City.
Sullivan, Lawrence Francis	Downey.
Swab, Charles Casper	Cedar Rapids.
Swift, Charles Henry	Lodgepole, Neb.
Talcott, Don Deroy	Arion.
Teufel, John Carl	Moscow.
Thierman, Ernest Julius	Cedar Falls.
Turner, Edward Marsh	Iowa City.
White, Seward H.	Olin.
Whitehead, Ellis Herbert	Quimby.
Wick, Ruell Dick	Cedar Falls—95.

SPECIAL STUDENTS

Arnett, Lillie Amanda	Springhill, Ill.
Hoffman, Paul McConnell	Muscatine.
Morgan, Mabel Ruth	Bunker Hill, Ill.
Seymour, Sarah Libbie, B. A., '97; M. A., '00.	Iowa City.
Smith, Oakley Garfield	Iowa City.
Umberger, Thomas Daniel Terrill	Burlington.
Whitmore, Clara B., B. A., '00	Fairfield—7.

SUMMARY

Seniors	- - - - -	96
Juniors	- - - - -	46
Sophomores	- - - - -	88
Freshmen	- - - - -	95
Special	- - - - -	7
Total	- - - - -	<u>272</u>

THE COLLEGE OF HOMŒOPATHIC MEDICINE

SENIORS

Anderson, George William	Dysart.
Babcock, Elmer	Eldora.
Kauffman, Edward Charles	Estherville.
Kemp, Everett D.	Iowa City.
Lauder, Frank Trowbridge	Orient.
Martin, Hobart Earle	Boone.
Musgrave, George James	Farmington.
Parsons, Percy Leigh	Traer.
Pond, Issi Otto	Gladbr. ok.
Richards, Frank O.	Iowa City.
Sarchet, George A.	Algona.
Snitkay, Charles John	Tipton.
Stoakes, William H.	Bradgate.
Wenzlick, George John	Iowa City.
Wilkinson, Landy Abner	Hedrick.
Winter, Louis Ernst	Hampton, Ill.—16.

JUNIORS

NAME	RESIDENCE
Alden, George H.	Des Moines.
Clapp, Archie Burwell	LeClaire.
Cogswell, Charles Herbert, Jr.	Cedar Rapids.
Crew, Arthur Elwood	Marion.
Fullmer, Burt Emerson	Marshalltown.
McDowell, Gilbert Thompson	Woonsocket, So. Dak.
Page, Clarence Vernon	Iowa City—7.

SOPHOMORES

Beatle, Charles Andrew	Waterloo.
Bywater, Edward Napoleon	Garwin.
Chase, Ransom Jay	Seattle, Washington.
Graves, Rex Vale	Hillsboro.

Hanson, Edward Bernad	Strawberry Point.
Hollis, Edward L.	Hudson.
M. Di., '99 State Normal.	
Holman, Henry Delavan	Rockwell.
Huff, Ellsworth Abram	Iowa City.
Jackson, Anna	Oskaloosa.
Keaster, Joseph Bruce	Lancaster
Kemp, Malcolm Edward	Toledo.
McMillan, Edwin Crowl	Marshalltown.
Owen, William Roy	Osage.
Pratt, Grafton Henry	Washington.
Sandy, Benjamin Brooks	Lake City.
Sellburg, Nicholas	Akron.
Steele, Glenn Morris	Perry.
Stockman, James William	Richland.
Waltman, William Henry	Iowa City.
Wild, Peter Rowland	Toledo—20.

FRESHMEN

Adrian, Frank	Sigourney.
Baker, Frank Leroy	Fayette.
Berkeley, Ralph Lee	Maquoketa.
Bishop, Harry Everet	Atlantic.
Bott, George Floyd	Lancaster.
Carson, James Alexander	Maquoketa.
Hand, George	Hay Springs, Neb.
Hill, George Ray	Fayette.
Jacobsen, Robert Andrew	Lake View.
Lintleman, Fred Richard	Lake City.
Loizeaux, Charles Edward	Des Moines.
Loizeaux, Leon Samuel	Des Moines.
Sears, Benjamin Lovett	Sears, Ill.
Snavely, John L.	Sterling, Ill.
Steff, Fred William	Forest City—15.

NURSES' SCHOOL

SENIORS

Connors, Virginia
Williams, Alice A.

West Liberty.
Mount Vernon—2.

JUNIORS

Dean, Meda
Fulmer, Jessie N.
Mether, Emmaline Marie
Richards, Sarah Maude

West Branch.
Marshalltown.
Waverly.
Iowa City.—4

FRESHMEN

Beattle, Alice
Brown, Katrine
Rhodes, Charlotte

Clarksville.
Mason City.
Sigourney.—3

SUMMARY

Seniors, -	-	-	-	-	16
Juniors, -	-	-	-	-	7
Sophomores,	-	-	-	-	20
Freshmen,	-	-	-	-	15
Nurses' School,	-	-	-	-	9
Total,	-	-	-	-	<u>67</u>

THE COLLEGE OF DENTISTRY

GRADUATES JUNE, 1900

Brown, Esther	Stacyville.
Browning, Ernest W.	Morning Sun.
Devaney, W.	Albert Lea, Minn.
Dexter, C. J.	Fort Dodge.
Eller, C. L.	Hedrick.
Fairall, J. A.	Des Moines.
Gibford, H. T.	Prairie City.
Griffis, T. R.	Carson.
Goodenough, G. D.	Gowrie.
Hall, E. A.	Reinbeck.
Hasek, A. M.	Cedar Rapids.
Holson, Allienne M.	Grinnell.
Holson, E. R.	Iowa City.
Kenderdine, W. H.	Iowa City.
Knowles, A. C.	Jesup.
Kelley, T. H.	Oxford.
Lockhart, Wm. I.	Mediapolis.
McCartney, O. E.	Iowa City.
Mentzer, J. A.	Mason City.
Overholt, F. E.	Alden.
Oldaker, Leroy J.	Exira, Neb.
Parsons, C. D.	Plattsburg, N. Y.
Peek, E. S.	Fontanelle.
Shannon, R. B.	Sterling, Ill.
Will, R. T.	Red Oak.
Young, A. S.	Geneseo, Ill.—26.

GRADUATE NOVEMBER, 1900

Rolland Bruce Moore	Iowa City—1.
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SENIORS

Benson, Graud Clarence	Gladbrook.
Birchard, Thomas Leon	Kellogg.
Cameron, William John	Des Moines.

Cannom, Willis Lloyd	Toledo.
Carpenter, Lockwood Dickerson	Des Moines.
Chamberlin, Lewis	Aledo, Ill.
Davis, John Allen	Milan, Ill.
Davis, John David Carson	Reinbeck.
Dewey, James Baker	West Union.
Faber, Arthur Julius	Chaska, Minn.
Fraser, Milfred Orvy	Sterling, Ill.
Gilbreath, Frank Milton	Mandan, No. Dak.
Godlove, Lester Linn	Riverside.
Hamil, Melvin Preston	Cascade.
Hammer, William Ulysis	Frank Pierce.
Hecht, Ralph Henry	Tipton.
Houser, David George	Urbana.
Kier, George Paul	Eldora.
Lang, Frank X.	New Vienna.
Lundy, Luther Thomas	West Point, Miss.
Macfadden, Cornelius Centennial	Luverne, Minn.
Maxon, Lon J.	Cedar Rapids.
Moore, Charles Aden	Cedar Rapids.
Moore, Rolland Bruce	Iowa City.
Morrison, Jefferson Code	Grundy Center.
Morton, Raymond Archibald	Shelby.
Moss, Solomon	Greene.
Naibert, Wencil Frank	Cedar Rapids.
Pringle, George Arthur	Beaver Dam, Wis.
Reed, George Earl	Milton.
Schrader, Elmer Anthony	Clay Center, Kan.
Shane, Charles Newton	Jesup.
Tilton, Charles Franklin	Eugene.
Tourtellot, Louis J.	Wyoming.
Wait, Theodore Franklin	Iowa City.
Woolverton, Ella Gennevieve, M. D., '95	Iowa City—'86.

JUNIORS

Allen, Henrietta Frances	Allenwood, Pa.
Banton, Bertram Mortimar	Waterloo.
Blodgett, Corydon Lewis	Central City.
Churchill, Guy Reece	Muscatine.
Cook, Harry Delmar	Red Oak.
Cooling, Arthur Bevan	Iowa City.
Corsaut, Charles King	Parkersburg.

Cress, George	Riverside.
Daly, Eunice Elizabeth	Troy.
Detwiler, Caroline	Audubon.
Dunning, Walter Lyle	Mt. Ayr.
Evers, Henry S.	Iowa City.
Haffa, Frank Arthur	Waterloo.
Haller, William Edward	Durant.
Harris, Cleo Stanley	LaMotte.
Herbert, Vane Eli	Adair.
Hildebrand, Joseph Arthur	Waterloo.
Householder, Frank Leroy	Winthrop.
Hoxie, Charles Ray	Waterloo.
Jeffers, William Joseph	Red Oak.
Johnson, Archie D.	Curew.
Kain, William Edward	Algona.
Lee, Arthur C.	Iowa City.
Lespinasse, Adolph Frederick de	Orange City.
Lewis, LeRoy Ward	LeMars.
Lingo, Arthur Marling	Riverside.
Matheson, George Angus	Toledo.
Meyer, Charles Edwin	LeClaire.
Meyer, Frank Appel	Elkader.
Miner, Cora	Waukon.
Mueller, Henry Christian	Auburn.
Munger, Francis Elbriggs	Sioux City.
Niswander, Charles Harvia	Brooklyn.
Oven, Adelbert Otto von	Miles.
Paulsen, Herman Henry	Rock Island, Ill.
Porter, James Tudor	Washington.
Reedy, Edward Hager	Beatrice, Neb.
Rhoades, Rex Hays	Oakland.
Rittler, Elmer George	Noble.
Roth, Jay Arthur	Fairfield.
Rupp, Hugh	Washington.
Sherer, Roy Eugene	Glidden.
Sherman, William Arthur	Storm Lake.
Small, Berton Alonzo	Reinbeck.
Spence, William Everett	Milton.
Stimmel, Edgar Clifton	Iowa City.
Suthers, Wilfie Abraham	Maquoketa.
Thode, Guy Eugene	Stuart.
Volland, Roscoe Henry	Dunlap.

Waud, Clarence Cary
 Weiland, Frank Henry
 Witter, Louis Agassiz
 Yeoman, Mitchell Brice

Germania.
 Ashton, So. Dak.
 Muscatine.
 Dorchester—53.

FRESHMEN

Ackert, Charles Barton
 Bailey, Edgar
 Beckman, Fritz Smith
 Beeman, Clarence Evander
 Bell, Frank Joseph
 Bigger, Lee Fisk
 Bloom, Robert Edward
 Brown, Charles Frederick
 Brown, Clarence Aubrey
 Brown, Roy Lawrence
 Clark, Floyd Chester
 Clifford, Patrick Henry
 Crose, Reuben Brooks
 Crowell, Irving Gardner
 Currer, George Robert
 Dannatt, Ernest Garfield
 DeGross, Paul Burritt
 DeLano, Courtland Alva
 Duncan, Warren
 Ellis, Gideon Charles
 English, William Kirk
 Faris, John Cameron
 Fordyce, Chester
 Gallagher, Oscar Harley
 Gilbert, Bert
 Green, Oliver Nelson
 Harned, Calvin Waldo
 Harper, Albert S.
 Harvey, Charles Marvin
 Hemminger, Dave Mitten
 Hiatt, Will Merriam
 Horrabin, Alfred
 Houser, Harry Pirnetti
 Humeston, Fred Lee
 Keehl, Walter Edward
 Kepford, Joseph Clarence

Galva.
 Charles City.
 Minneapolis, Minn.
 Iowa City.
 Dell Rapids, So. Dak
 Jefferson.
 Iowa City.
 Elwood.
 Sioux City.
 Winterset.
 Parkersburg.
 Cedar Falls.
 Shenandoah.
 Ponca, Neb.
 Sioux City.
 Camanchee.
 Sterling, Ill.
 Lone Tree.
 Columbus.
 Maquoketa.
 Marshall, Minn.
 Morning Sun.
 Fairfield.
 Washington.
 Osceola.
 Newton.
 Lone Tree.
 Vinton.
 Guttenberg.
 Newville, Pa.
 Red Oak.
 Des Moines.
 Urbana.
 Union.
 Battle Creek.
 Independence.

COLLEGE OF PHARMACY

SENIORS

Broodeen, Luther LeRoy B. S '99 Augustana.	Essex.
Coye, Charles Horton	Carson.
Deur, William Eugene	Missouri Valley.
Gates, Roy Homer	Greene.
Harvey, James Raymond	Pleasant Plain.
Holt, Stephen Albion	Creighton, Neb.
Hormel, Eckert Emil	Iowa City.
Horton, Grant	Brighton.
Joy, Nelle Frances	Grinnell.
Loucks, Grace	Danbury.
McMurray, Charles Azariah	Maquoketa.
Mack, Charles Leonard	Omaha, Neb.
Morgan, John Walter	Iowa City.
Schalekamp, Henry James	Orange City.
Senn, John William Henry	Osmond, Neb.
Stayskal, Joseph	Vining.
Ulch, James Joseph	Elberon.
Workman, Ellsworth	Stanwood—18.

JUNIORS

Barkdoll, Bertram Eugene	Vinton.
Berkley, Charles Harvey	Logan.
Berry, John Francis	Clermont
Blakely, Charles Winford	Dexter.
Blowers, Herbert Bert	Waterloo.
Bruhn, Otto John	Reinbeck.
Chapple, Alfred Henry	Waterloo.
Corry, Gilbert Ray	Auburn.
Coye, Elmer Lucius	Carson.
Crooks, Lloyd Alexander	Quasqueton.
Devine, Terry	Danbury.

Flanagan, William Thomas	Williamsburg.
Ford, Lawrence Thomas	Ottumwa.
Fulner, John Edward	Sabula.
Goodall, John Albert	South Omaha, Neb.
Greve, John Henry	Marne.
Haman, Edward Winslow	Cedar Rapids.
Hanzlik, Paul	Cedar Rapids.
Hild, Harry	Toledo.
Hild, Ray Joseph	Toledo.
Hill, Albert Ernest	Greene.
Jeppson, Alvin Levin	Meade, Neb.
Junger, Paul Hugo	Reinbeck.
Longwell, Albert Floyd	Wellman.
Loucks, Richard Collier	Danbury.
McCleary, Clarence Clark	VanMeter.
McCready, Sylvester Clyde	Macedonia.
McDonnell, James Edward	Williamsburg.
Mitchell, Sumner	Macedonia.
Norton, Guy Coe	West Bend.
Robertson, Harry Arthur	Columbus Junction.
Roushar, Joseph Charles	Clutier.
Schmidt, Albert John	Cherokee.
Shull, Harry White	Galesburg, Ill.
Strong, Harry Lee	Vinton.
Sullivan, Peter Francis	Jackson, Neb.
Sutton, Robert Reay	Shenandoah.
Swain, Jay Wheaton	Humboldt.
Van den Berg, Guy	Alton—39.

SPECIAL STUDENT

Lowry, William David, D. D. S. '99 Davenport—1.

SUMMARY

Seniors	.	-	-	-	-	-	18
Juniors	-	-	-	-	-	-	39
Special	-	-	-	-	-	-	1
Total	-	-	-	-	-	-	58

SUMMARY OF REGISTRATION OF STUDENTS

THE COLLEGE OF LIBERAL ARTS

SENIORS	Men	Women	Total
Classical	17	7	24
Philosophical A	5	11	16
Philosophical B	29	7	36
Scientific	17	4	21
Scientific and Medical	1	0	1
Civil Engineering	7	0	7
Total	76	29	105
JUNIORS			
Classical	19	11	30
Philosophical A	2	16	18
Philosophical B	27	24	51
Scientific	12	2	14
Scientific and Medical	4	0	4
Civil Engineering	6	0	6
Electrical Engineering	2	0	2
Total	72	53	125
SOPHOMORES			
Classical	9	13	22
Philosophical A	8	12	20
Philosophical B	19	13	32
Scientific	13	5	18
Scientific and Medical	4	0	4
Civil Engineering	19	0	19
Electrical Engineering	3	0	3
Total	75	43	118

448 THE STATE UNIVERSITY OF IOWA

FRESHMEN

Classical	10	6	16
Philosophical A	10	16	26
Philosophical B	36	27	63
Scientific	30	7	37
Scientific and Medical	11	1	12
Civil Engineering	12	0	12
Electrical Engineering	2	0	2
Total	111	57	168
Total in four college classes	334	182	516
Special Students	22	34	56
Registered visitors	0	7	7
Professional students taking partial work	78	2	80
Physical Training	0	43	43
Summer Session 1900	41	59	100
Total in College of Liberal Arts	475	327	802

THE GRADUATE COLLEGE

Candidates for the degree of Doctor of Philosophy	13	2	15
Candidates for the degree of Master of Arts	47	26	73
“ “ “ “ Master of Science	25	3	28
“ “ “ “ B. S. in E. E.	1	0	1
Graduate students not candidates for degrees	9	22	31
Total	95	53	148

THE COLLEGE OF LAW

Seniors	140	1	141
Second Year	10	0	10
First Year	113	1	114
Special	3	0	3
Total	266	2	268

SUMMARY OF STUDENTS

449

THE COLLEGE OF MEDICINE

Seniors	33	3	36
Juniors	45	1	46
Sophomores	85	3	88
Freshmen	93	2	95
Special	3	4	7
Total	<u>259</u>	<u>13</u>	<u>272</u>

THE COLLEGE OF HOMŒOPATHIC MEDICINE

Seniors	16	0	16
Juniors	7	0	7
Sophomores	19	1	20
Freshmen	15	0	15
Total	<u>57</u>	<u>1</u>	<u>58</u>

THE COLLEGE OF DENTISTRY

Seniors	35	1	36
Juniors	48	5	53
Freshmen	59	0	59
Total	<u>142</u>	<u>6</u>	<u>148</u>

THE COLLEGE OF PHARMACY.

Seniors	16	2	18
Juniors	39	0	39
Special	1	0	1
Total	<u>56</u>	<u>2</u>	<u>58</u>
Grand total including duplicates	1350	404	1754
Duplicates in Summer Session	20	22	42
Duplicates in Physical Training	0	33	33
Duplicates in Different Colleges	132	5	137
	<u>152</u>	<u>60</u>	<u>212</u>
Grand total	1198	344	1542

ALPHABETICAL LIST OF STUDENTS

MATRICULATION

NO.	
818	Abernethy, Herbert A.
266	Achenbach, Naomi
216	Ackert, Charles Barton
1426	Adams, Wilber H.
876	Adrian, Frank
1268	Ahern, Timothy Joseph
211	Ainsworth, Adelaide L.
577	Albert, Fred, Jr.
72	Albert, Henry
93	Alden, George H.
300	Alden, Harry Francis
948	Alford, Lore
560	Allbee, Gustavus, Jr.
1001	Allen, Frank J.
9	Allen, Henrietta Frances
180	Allen, Lloyd Raymond
754	Allen, Robert Emmet
490	Allen, Roy William
1309	Allin, Norra
6	Anderson, George W.
440	Anderson, Harry N.
1037	Anderson, Laura
443	Anderson, Rudolph M.
765	Anderson, William H.
151	Angus, Haney Adelbert
465	Anthony, Charles Henry
519	Appel, Fred Lyons
563	Arnett, Lillie Amanda
752	Arnold, Henry Stephen
1243	Artherholt, Luther G.
1031	Arthur, Edwin Calhoun
259	Asthalter, Harold Charles
843	Babcock, Elmer
1127	Baer, Thomas Horatio
1392	Bailey, Charles Henry
980	Bailey, Edgar
1462	Bailey, Ellen May
708	Bailey, Frank Sidney
667	Bailey, Frederick Wm.
275	Bailey, John William
601	Bailey, Katherine Ethel
108	Baird, Herbert John
957	Baker, Florence
314	Baker, Frank Leroy
1448	Baker, Irving Wesley
1074	Baker, Mark Emery
166	Baldwin, Clare C.
45	Baldwin, Daniel
745	Ball, George W., Jr.
1375	Ball, Henry Moffatt
1466	Ball, Marguerite Adell
790	Ball, Walter McDowell

MATRICULATION

NO.	
604	Ballard, Mary Elizabeth
1359	Balle, Sophia Margaret
759	Ballou, Benning Edward
814	Balluff, Walter Martin
663	Bannister, Robert James
1	Banton, Bertram Mortimer
1372	Barber, Myrtle
168	Barkdoll, Bertram Eugene
768	Barker, Arthur James
547	Barr, William Milton
1457	Barrett, Albert Moore
776	Barrett, Anna Moore
1210	Barrett, Jacob Edward
—	Barrett, Mary
226	Bartholow, Claude A.
269	Bartlett, Herbert Gallup
1140	Barton, Harry Raymond
1417	Bartsch, Paul
1412	Baughman, Ruby
206	Baughn, Wilnot Lawson
535	Beach, Lena Alice
215	Beach, Melville Augustus
595	Beam, Hugh Atlee
587	Bear, Wilson Grant
12	Beatie, Charles Andrew
262	Beaulieu, Leo Victor
963	Bechly, Edward,
1151	Beck, William Edmund
649	Beckman, Fritz Smith
498	Beckman, Stephen Joseph
924	Bedford, Lyman Daniel
797	Beebe, Goldie May
199	Beeman, Clarence E.
373	Bell, Frank Joseph
573	Bell, William B.
872	Belsheim, Andrew Gilbert
992	Bemis, Frances Perl
877	Bender, David Wilson
155	Bennett, William Claude
209	Benson, Graud Clarence
—	Bergen, Cary von
1383	Bergman, Roy Earnest
1314	Berkeley, Ralph Lee
1216	Berkley, Charles Harvey
1052	Berry, Edmund Charles
1104	Berry, John Francis
597	Berryhill, James Guest, Jr.
184	Bice, Gerald Roy
388	Bigger, Lee Fisk
1275	Biggs, Mrs. Eleanor S.
585	Birchard, Thomas Leone
1082	Birk, Levi Albert

- 1204 Birney, Varillas Clenthos
 409 Birss, George Alexander
 853 Bishop, Harry Everet
 1459 Black, Anna Bell
 522 Black, Robert Alfred
 1468 Blackburn, Newman A.
 1520 Blackmar, H. E.
 1178 Blackmore, Harriet N.
 991 Blackmore, Ralph Davis
 91 Blakely, Charles Winford
 463 Blanchard, Emir E.
 503 Blodgett, Corydon Lewis
 428 Bloom, Robert Edward
 386 Blowers, Herbert Bert
 298 Blum, Daisy Pearl
 11 Blythe, Edward E.
 591 Boardman, Benjamin
 1083 Bock, William James
 798 Boddy, Marshall Vincent
 1238 Boehm, Walter Martinus
 380 Boerner, Edna Louise
 1007 Boler, John
 930 Bond, Ethel May
 501 Bond, Perry Avery
 149 Boots, Frederic Warner
 1471 Bordner, Richard L.
 954 Bosley, Roy Harrison
 1057 Bossert, Burt Ellis
 225 Bott, George Floyd
 289 Bowen, Albert Sidney
 879 Bowen, Charley Edgar
 602 Bowen, Jesse Clark
 1476 Bowersox, Eugene C.
 140 Bowman, Howard Edgar
 1382 Bowman, John Gabbert
 1250 Bowser, William Francis
 886 Bozarth, Maud
 845 Brackett, Merritt
 917 Brackett, Otto Thomas
 1006 Brackney, Herbert W.
 1008 Brackney, Herman John
 406 Braden, Austin Lynn
 1236 Bradley, Charles Clark
 729 Bradley, Clifford E.
 312 Bradley, Frank Timothy
 1100 Brainerd, Frederick G.
 785 Brainerd, Helen Louise
 1279 Branson, Laura H., M. D.
 1479 Brasted, Fred
 280 Breen, James
 761 Bridenstine, Burton Vance
 659 Briggs, Charles Orin
 691 Briggs, Fletcher
 1249 Briggs, Francis William
 1414 Briggs, George Nathaniel
 1425 Brink, Francis Newton
 366 Brockett, Louise
 1330 Brockway, Alice Rowena
 1480 Brockway, Earle Bailey
 875 Brockway, James M.
 1027 Broodeen, Luther LeRoy
 987 Brose, Frank Verne
 285 Brown, Arnold Elmer
 1199 Brown, Charles Frederick
 1303 Brown, Charles Sumner
 1079 Brown, Clarence Aubrey
 435 Brown, Edwin Keech
 1401 Brown, Florence Emily
 1214 Brown, Francis Henry
 621 Brown, Maud Anna
 977 Brown, Roy Chase
 1005 Brown, Roy Lawrence
 608 Brown, Samuel Joe
 277 Bruhn, Otto John
 1125 Brush, Edward Lewis
 1455 Buckles, George Russell
 376 Buckley, Fred Watson
 899 Buckmaster, Raleigh A.
 908 Buffum, Hugh Straight
 709 Bulger, Joseph Stanhope
 1221 Bullock, William Elmer
 273 Burgum, Harry Pitkin
 806 Burnham, Elizabeth
 70 Burns, Thomas John
 943 Burrier, Emmett Francis
 668 Burrus, James Harvey
 240 Burson, Albert Greenlee
 1053 Burton, Albert Johnson
 775 Burton, Mrs. Eva Rose
 676 Burton, Harry Edward
 33 Bushnell, William F.
 641 Butler, Lindley Moses
 1255 Butler, Maud Bernadetta
 855 Byrnes, Ralph Leonidas
 624 Bywater, Edward N.
 887 Cady, George Luther
 458 Calkins, Guy Smith
 172 Call, Roy Guyon
 317 Cameron, William John
 815 Cannon, Willis Lloyd
 530 Cantwell, John Dalzell
 1282 Carder, Helen L.
 784 Carle, Frank Clifford
 686 Carlson, Ernest Emil
 811 Carlson, Frank Gilbert
 732 Carpenter, Edwin Hager
 816 Carpenter, Lockwood D.
 823 Carr, Fred Parker
 220 Carr, Minnie Ida
 288 Carroll, Elizabeth Fawcett

- 109 Carson, James Alexander
 780 Carson, Mabel E.
 74 Carter, Edward Albert
 1108 Carter, Leila Belle
 417 Casady, Philip Murray
 102 Casady, Thomas
 1355 Cash, Emma May
 810 Cassidy, Raymond W.
 40 Cathcart, John Watson
 1196 Cavanagh, Lucy Mary
 197 Chamberlain, Ben H.
 1421 Chamberlian, Park
 1454 Chamberlin, Leila May
 1110 Chamberlin, Lewis
 374 Chamberlin, Louise
 141 Chambers, Samuel Laward
 447 Chantry, Lillian
 1229 Chapman, Horace Ray
 1319 Chapple, Alfred Henry
 891 Charlton, Max Rosecrans
 1156 Chase, Ransom Jay
 947 Chase, William Bronk
 1398 Chatham, Irma
 1458 Chesley, Frank Ephraim
 1111 Chew, Elmer Leonard
 737 Childers, Ethel Marion
 482 Childs, Hal Augustan
 182 Choate, Rufus Clark
 198 Christensen, Christen J.
 590 Churchill, Guy Reece
 657 Clapp, Albert Carpenter
 332 Clapp, Archie Burwell
 669 Clapp, Mortimer Edwy
 400 Clark, Alice May
 319 Clark, Floyd Chester
 1363 Clark, Maud Geneva
 1484 Clark, Whit H.
 939 Clark, William Clarence
 1069 Clearman, Albert Edward
 1326 Clearman, Hattie Marie
 201 Clearman, Rollen Ives
 1165 Clegg, Samuel Harvey
 1334 Clifford, Patrick Henry
 1365 Cline, Clifford,
 450 Close, Katherine Stevens
 755 Coast, William Oscar
 510 Coburn, Robert Leroy
 1444 Cochrane, Thalia N.
 1371 Coen, Walter Scott
 498 Coffin, Frank W.
 689 Cogswell, Charles Herbert
 1384 Cogswell, John Wilkinson
 1093 Cohen, Harry Dave
 1225 Colburn, William Arlin
 897 Cole, Alvernus Humphrey
 268 Cole, Marvin Luther
 1551 Collins, Edward R.
 950 Collins, Frank Butler
 1298 Collins, Roy A. Miles
 1399 Colony, Cora Eleanor
 673 Confare, Bert
 1198 Connor, Jacon Elon
 634 Converse, Charles Crozat
 487 Cook, Harry Delmar
 1009 Cook, Roy Arthur
 579 Cooling, Arthur Bevan
 117 Coombs, Fred Hamilton
 1158 Cooper, Clyde Barnes
 555 Cooper, Elizabeth Janette
 561 Cooper, Esther Leiper
 846 Cooper, Jay Clark
 990 Corf, John Swinborn
 730 Corlett, Jessie May
 681 Corry, Gilbert Ray
 1296 Corsaut, Charles King
 363 Cory, Charles Seldon,
 297 Cory, Mrs. Charles Seldon
 1180 Cotant, Charles Thomas
 1339 Cotton, Richard Lee
 224 Coulthard, George Harry
 969 Cox, Clifford Vernard
 1113 Coye, Charles Horton
 137 Coye, Elmer Lucius
 801 Coyne, William Lawrence
 — Cradler, J. W.
 485 Crane, Edward Harrison
 247 Crane, Ernest B.
 508 Crane, Eudell Thomas
 868 Crans, Norman Wallace
 1276 Crary, Stephen Arnold
 263 Crawford, Tillie Jane
 323 Cress, George
 46 Cressler, Frank Ernest
 44 Creswell, William L.
 105 Cretzmeyer, Charles H.
 1091 Crew, Arthur Elwood
 1112 Crockett, Frank Walford
 1270 Cronin, Sarah Elizabeth
 75 Crooks, Lloyd Alexander
 370 Crose, Reuben Brooks
 321 Cross, Cash R.
 348 Cross, Frank Wallace
 313 Crowell, Charles Rollins
 245 Crowell, Irving Gardner
 794 Crowell, Lucius Alfred
 213 Crowley, Jay M.
 852 Crum, William Edwin
 128 Currer, George Robert
 733 Currier, Albert Moore
 295 Curtis, Alice Bertha

- 1543 Curtis, Cora Gertrude
 982 Cushing, Raymond George
 596 Dabney, Clara Mabel
 706 Dahms, Edward John
 684 Dakin, Amy Dorothy
 925 Daley, Gustave Johann
 299 Dalton, Ula Elizabeth
 7 Daly, Eunice Elizabeth
 620 Daly, Maud Alice
 124 Danell, Karl August
 1048 Dannatt, Ernest Garfield
 700 Daum, Philip Hugh
 1405 Daum, Selma A.
 1226 Davies, Mrs. Alice Raines
 1084 Davies, Edward Patrick
 296 Davis, Arthur William
 1473 Davis, Florence Mabel
 826 Davis, Frank T.
 833 Davis, John Allen
 460 Davis, John David Carson
 87 Day, Archie Loraine
 405 Day, William Elton
 1159 Dayton, Charles Houghton
 715 Dayton, Leona Mellie
 1208 Dean, Ray Herbert
 253 DeBusk, William Hayden
 121 DeGroff, Paul Burrirt
 318 DeLano, Courtland Alva
 724 Delavan, George Edwin
 789 Dennis, William
 678 DeSellem, Anna Louise
 1192 Detwiler, Caroline
 799 Deur, William Eugene
 — Devany, Mary
 254 Devine, Terry
 1021 Dewey, Charles Almon
 1109 Dewey, James Baker
 1194 Dey, Ann Hull
 — Diamond, T. E.
 1404 Dick, George Stewart
 975 Diddy, Carl Foster
 1436 Dilley, Wesley Young
 960 Dillon, Bert John
 1032 Dingman, Marshal Edwin
 278 Dixon, Frank Leslie
 741 Dixon, Ollie Edith
 979 Dodds, Calvin Stewart
 1179 Donegan, Maurice F.
 835 Donohoe, Anthony P.
 1877 Donohoe, Ellen Marie
 1121 Doran, Thomas Cyrus
 1411 Dorcas, Herbert Clifford
 837 Dormoy, David Andrew
 145 Dotson, Eli E.
 680 Dow, Cora
 1451 Downey, Ezekiel Henry
 822 Downing, Harold Bliss
 195 Downing, Leroy Morgan
 881 Downing, Ralph Vernon
 1099 Drake, Fred Collins
 242 Drewry, Ray Forest
 912 DuBois, Walter Lynn
 643 Duff, Laura May
 290 Duggan, Abbie Lucy
 49 Dulin, John Albert
 27 Dunbar, David Owen
 65 Duncan, Warren
 — Dunham, Martha A.
 1080 Dunkel, George
 1433 Dunlap, Clara Mae
 284 Dunlap, Fanny
 189 Dunn, James
 565 Dunn, John Edward
 303 Dunning, Walter Lyle
 1043 Durkee, Harry Charles
 — Dutton, James H.
 777 Dye, Charles Wesley
 688 Dye, Harvey Leroy
 774 Dykstra, Clarence A.
 685 Dykstra, Sylvester Henry
 1290 Eade, John Laity
 639 Eaker, Jay Felts
 1415 Eaton, Ernest Theo.
 1035 Eaton, John Alvin
 1308 Eaton, William H.
 537 Eberhart, Frank Vaughan
 1020 Eby, Moray Leon
 1445 Eddy, Helen May
 551 Eddy, Mary Louise
 768 Ede, Ernest D.
 1271 Edgerton, Robert Henry
 1287 Edmonds, William Frank
 567 Edmondson, Charles H.
 907 Edson, Willis Charles
 803 Egan, George William
 399 Eller, Chester John
 362 Elliott, Ethel Anna
 1234 Elliott, Jay Edward
 558 Ellis, Dias Henry
 94 Ellis, Gideon Charles
 1470 Ellis, Mamie Ruth
 481 Elson, Lena
 301 Ely, Asher W.
 1285 Ely, Mrs. Mary Barber
 36 Emmerson, William S.
 524 Empkie, Clarence Arthur
 536 Emry, Frederic Grant
 1318 Ende, August von
 125 Engelke, Charles Rufus
 1133 Engle, Bert Jacob

- 181 English, William Kirk
 — Ensign, F. C.
 1002 Estes, James Howard
 499 Estes, Reuben Marion
 53 Evans, Frank Butler
 690 Everett, Emma Dolorosa
 1373 Everett, Lauretta
 1102 Evers, Henry S.
 703 Ewers, Albert Francis
 690 Faber, Arthur Julius
 1003 Fagan, Ralph Mather
 817 Faris, John Cameron
 586 Farnsworth, Asa A.
 559 Farquhar, S. Walter
 617 Feely, Elmer Frank
 152 Feely, Guy Anthony
 1310 Felkner, Elizabeth A.
 1477 Fellingham, John H.
 1344 Fellows, Lena Leota
 1374 Fellows, Ora Mabel
 1274 Felton, Royal Bradley
 1187 Fenton, Jennie Inez
 890 Ferguson, Harry Jay
 286 Ferry, Herbert Works
 1068 Ferson, Merton Leroy
 894 Fesenbeck, John Alvin
 150 Filer, Paul Schenck
 345 Fish, James Wilson
 — Fisher, Mayme T.
 507 Fitch, Eva Lillian
 571 Fitch, Harry Holland
 720 Fitz, Joseph Hamilton
 1535 Fitzgerald, James E.
 1232 Fitzpatrick, Daniel Helen
 183 Fitzpatrick, Dennis F.
 424 Fitzpatrick, Miles Joseph
 1312 Fitzpatrick, Thomas J.
 1101 Flanagan, William T.
 1331 Fleming, William E.
 1073 Fletcher, George G.
 955 Fletcher, George Howard
 858 Flynn, James Edward
 — Focht, Lawrence G.
 462 Ford, D. Fae
 1174 Ford, Lawrence Thomas
 1004 Fordyce, Chester
 210 Forncrook, Elva Marcella
 652 Foster, Blanche Fairfax
 881 Foster, Charles Clarence
 679 Foster, Florence Irene
 — Fountain, Alice M.
 1434 Fracker, George Cutler
 132 Frank, Carl Schurz
 1130 Frank, Walter Clyde
 78 Fraser, Milfred Orby
 898 Free, Samuel Pratt
 1150 Freeman, May Agnes
 1294 Freligh, Clarence Neil
 221 Frink, Raymond P.
 95 Fritschel, Godfrey C.
 1272 Fullarton, William R.
 1901 Fullmer, Burt Emerson
 1047 Fulner, John Edward
 423 Funson, Harry Shugart
 359 Gallagher, Oscar Harley
 89 Gannaway, Charles R.
 627 Gardner, Frances Maud
 1499 Gardner, Lucy F.
 160 Garland, Harrie Sanborn
 171 Gates, Ernest H.
 722 Gates, Roy Homer
 391 Gay, Anna May
 778 Genung, Clyde Thompson
 660 Geyer, Ellen
 1148 Geyer, Philip Wesley
 1485 Gibbs, George Sabin
 996 Gifford, Andrew James
 594 Gifford, Judge Herbert S.
 189 Gilbert, Bert
 1061 Gilbreath, Frank Milton
 719 Gilchrist, Janet Marjorie
 1320 Gillespie, John Leonard
 1323 Gilmore, Jesse Melford
 824 Gleason, Fred Brockway
 1022 Glenn, Jacob Frank
 229 Godlove, Lester Linn
 163 Goodall, John Albert
 1118 Goodwin, Charles Lucian
 721 Gordon, Mary Agnes
 618 Gordon, Pearl Avis
 66 Gordon, William Null
 921 Gould, Harley Joseph
 292 Gow, Annie Louise
 413 Gow, James Ellis
 656 Graff, Lulu A.
 847 Graham, Dell Ewing
 1291 Graham, Joseph Aloysius
 431 Graham, Joseph W.
 1011 Grant, Franklin Ferdinand
 56 Graves, Rex Vale
 28 Gray, George Henry
 896 Gray, John Franklin
 79 Gray, Oscar Sylvester
 1219 Greear, Clabe Baker
 1475 Greeley, Lennie Maby
 718 Green, Oliver Nelson
 167 Greene, Galen Edwin
 1170 Greve, John Henry
 654 Griffith, Harry Melvin
 665 Griffith, John George

- 232 Griffith, Mary Caroline
 984 Grillet, Ida Louise
 241 Grothaus, Tarana Johanna
 1487 Groves, Harry
 1116 Guldner, Ludwig Frederick
 539 Gurley, Zenas Robinson
 1063 Gutches, Roy Morris
 926 Hadley, Herbert Erwin
 488 Haffa, Frank Arthur
 20 Hagan, John
 24 Hagan, Martin
 1288 Hagler, Elisha Marion
 324 Hall, Howard Morgan
 1233 Halleck, Joseph Dwight
 610 Haller, William Edward
 192 Hallinan, Edward
 — Ham, Ella M.
 1302 Haman, Edward Winslow
 73 Hamil, Melvin Preston
 1424 Hamilton, Arthur S.
 231 Hamilton, Margaret Irving
 505 Hammer, William U.
 1222 Hand, George
 1442 Hanks, John
 736 Hanson, Clarence Henry
 1076 Hanson, Edward Bernad
 1188 Hanson, Frank F.
 1175 Hanson, Roy Marsh
 786 Hanson, William Patrick
 68 Hanzlik, Paul
 1088 Harding, Benjamin Philip
 494 Hardman, Roy Cordis
 890 Harkness, Gordon Follett
 842 Harlan, Charles Davis
 316 Harned, Calvin Waldo
 677 Harned, Luther Martin
 1155 Harold, Arthur William
 134 Harper, Albert S.
 343 Harris, Cleo Stanley
 520 Hart, Irving Harlow
 — Hart, Sara L.
 1337 Hartley, Charlotte Marion
 548 Harvey, Charles Marvin
 1205 Harvey, James Francis
 340 Harvey, James Raymond
 — Hastings, Jessie
 1289 Hatch, Daisy Eleanore
 1307 Hawk, Ira Tapper
 589 Hayes, Elenora Byington
 940 Hayler, George Rex
 857 Hays, Charles Rolvin
 707 Hayward, Roy Stanton
 671 Hazard, Leland Arthur
 1380 Hazard, Mrs. Minerva C.
 1322 Heald, Francis Alfred
 772 Healy, Patrick Henry
 86 Hearne, Charles Alfred
 115 Hearst, George Edward
 1416 Hearst, Mamie Frances
 731 Hecht, Ralph Henry
 542 Hegerich, George Harold
 1098 Heimback, Adolph James
 403 Heinen, William Clark
 945 Heitsman, Jacob Clyde
 746 Hellberg, Will Fred
 1081 Helmer, Charles C.
 1220 Helme, Carl Theodore
 350 Heminger, Amos Lincoln
 861 Hemminger, Dave M.
 1186 Hender, Alfred Baker
 909 Henderson, Frank Perrin
 1146 Henderson, John Clayton
 1012 Henderson, Lewis W.
 949 Henninger, Louis
 436 Henry, Carl Jeffrey
 415 Henry, Ward Casady
 1486 Hensel, Blanche Alice
 34 Herbert, Charles Leon T.
 26 Herbert, Vane Eli
 449 Hermann, Cornelia J.
 1391 Hershire, Elizabeth Akers
 327 Hershire, Mildred
 854 Hess, Adam Konigmacher
 613 Hess, Marguerite
 564 Hess, Sadie Murray
 412 Hetzel, Clarence Charles
 114 Hibbs, Fred Valentine
 911 Hickenlooper, Thomas W.
 1460 Hickman, James Harlan
 534 Hiatt, Will Merriam
 1266 Higbee, Herbert George
 704 Hild, Harry
 711 Hild, Roy Joseph
 470 Hildebrand, John Henry
 2 Hildebrand, Joseph A.
 352 Hill, Albert Ernest
 701 Hill, George Edgar
 1171 Hill, George Ray
 1123 Hinchon, William David
 1227 Hindman, Mrs. Minnie H.
 1423 Hinman, Annie Evelyn
 1217 Hobbs, Samuel Warren
 1496 Hodge, Lida
 716 Hoffman, Coleman L.
 661 Hoffman, Mabel V.
 588 Hoffman, Paul McConnell
 1157 Hofman, Minnie
 164 Hollenbeck, Henry S.
 986 Hollis, Edward L.
 236 Holman, Henry Delavan

- | | | | |
|------|--------------------------|------|--------------------------|
| 764 | Holman, James Royal | 429 | Jackson, John Edward |
| 1162 | Holmes, John Edward | 331 | Jackson, Thomas Sunter |
| 287 | Holmes, William Harrison | 59 | Jacobsen, Robert Andrew |
| — | Holson, Lulu Claire | 883 | Jacoby, William Kaul |
| 1154 | Holt, John Wesley | — | Jarvis, Calvin N. |
| 787 | Holt, Stephen Albion | 364 | Jarvis, Carolyn Belle |
| 951 | Honeywell, Henry Jesse | 848 | Jarvis, Fred Jackson |
| 739 | Hooker, Ira Sidney | 712 | Jeffers, George Newton |
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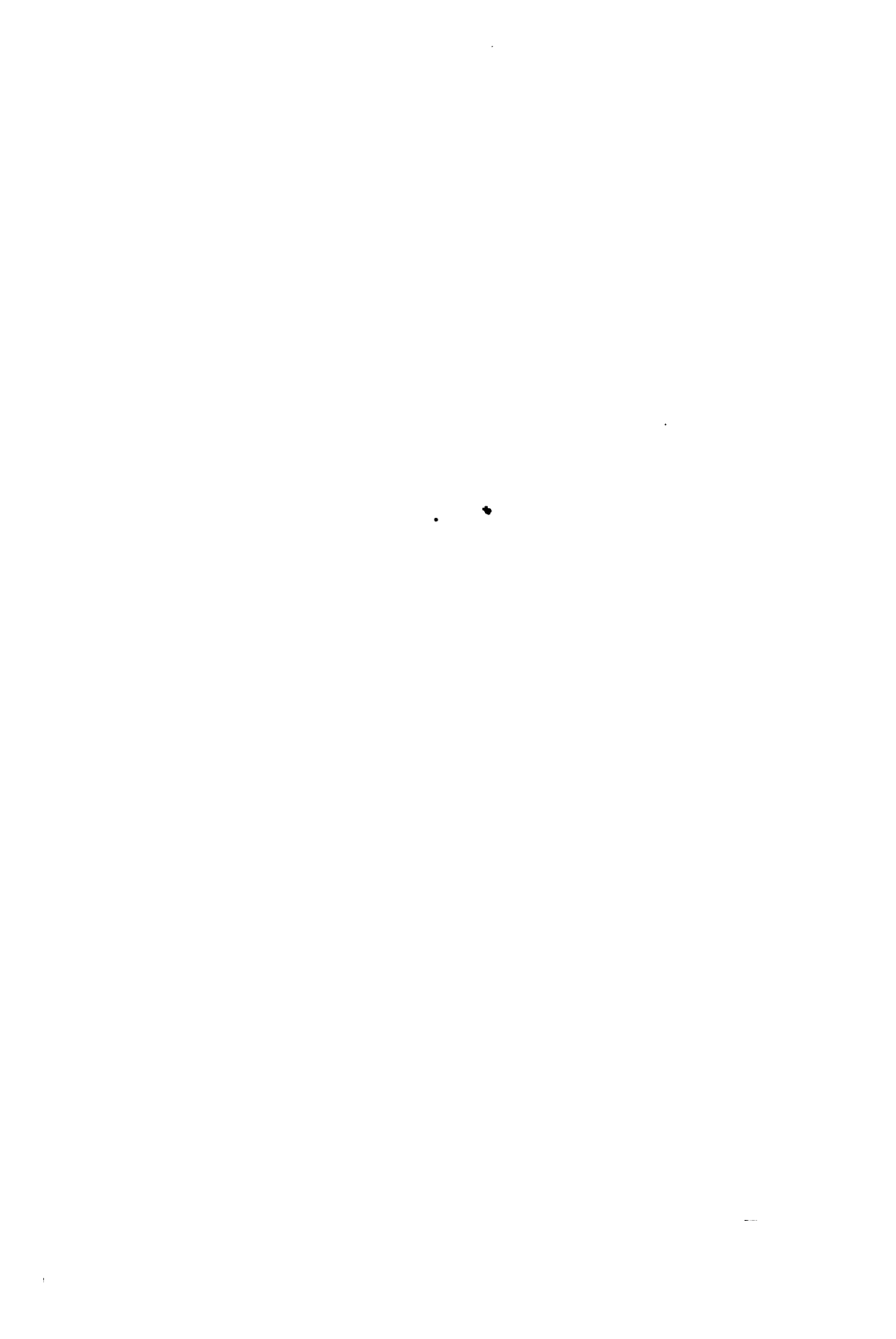
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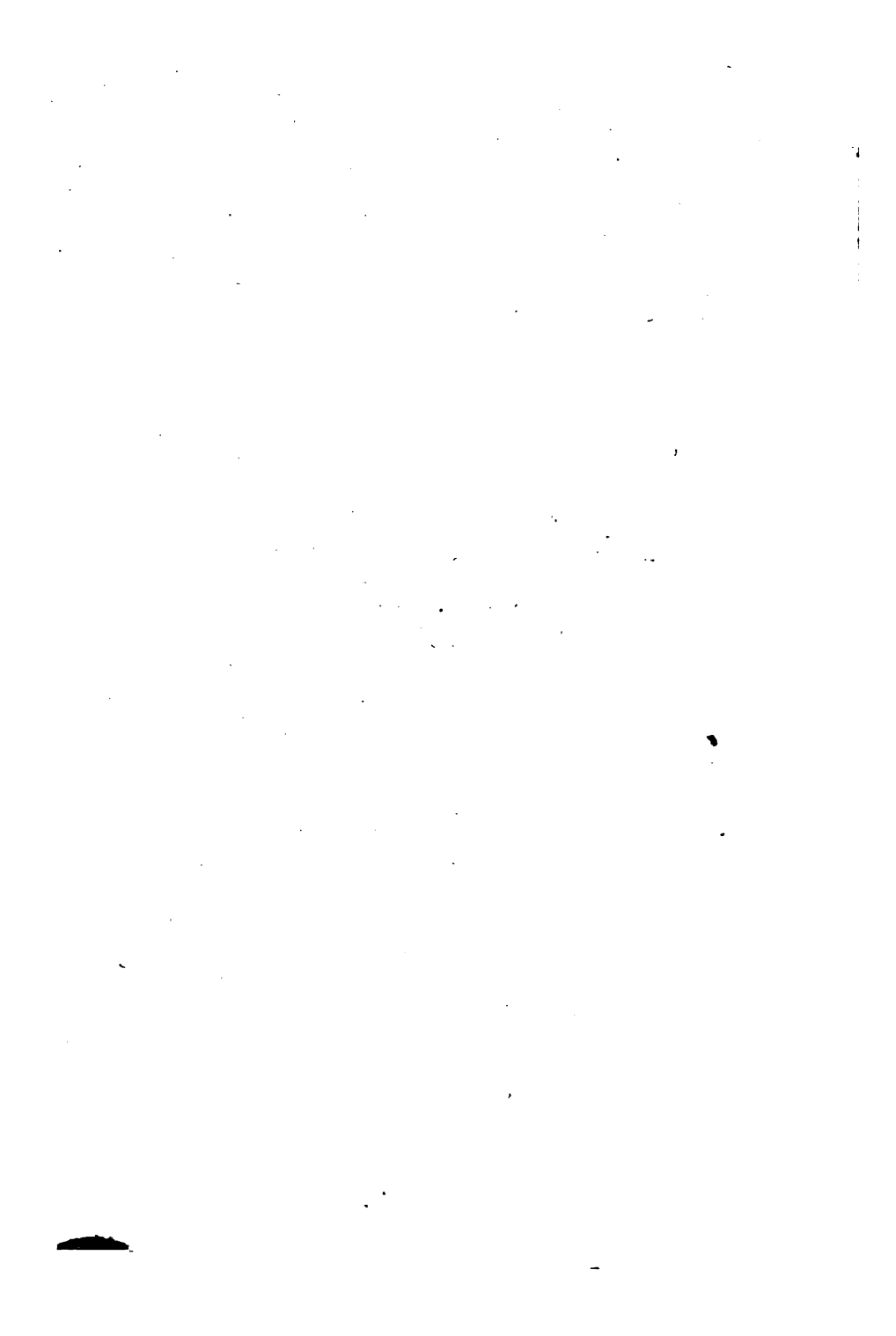
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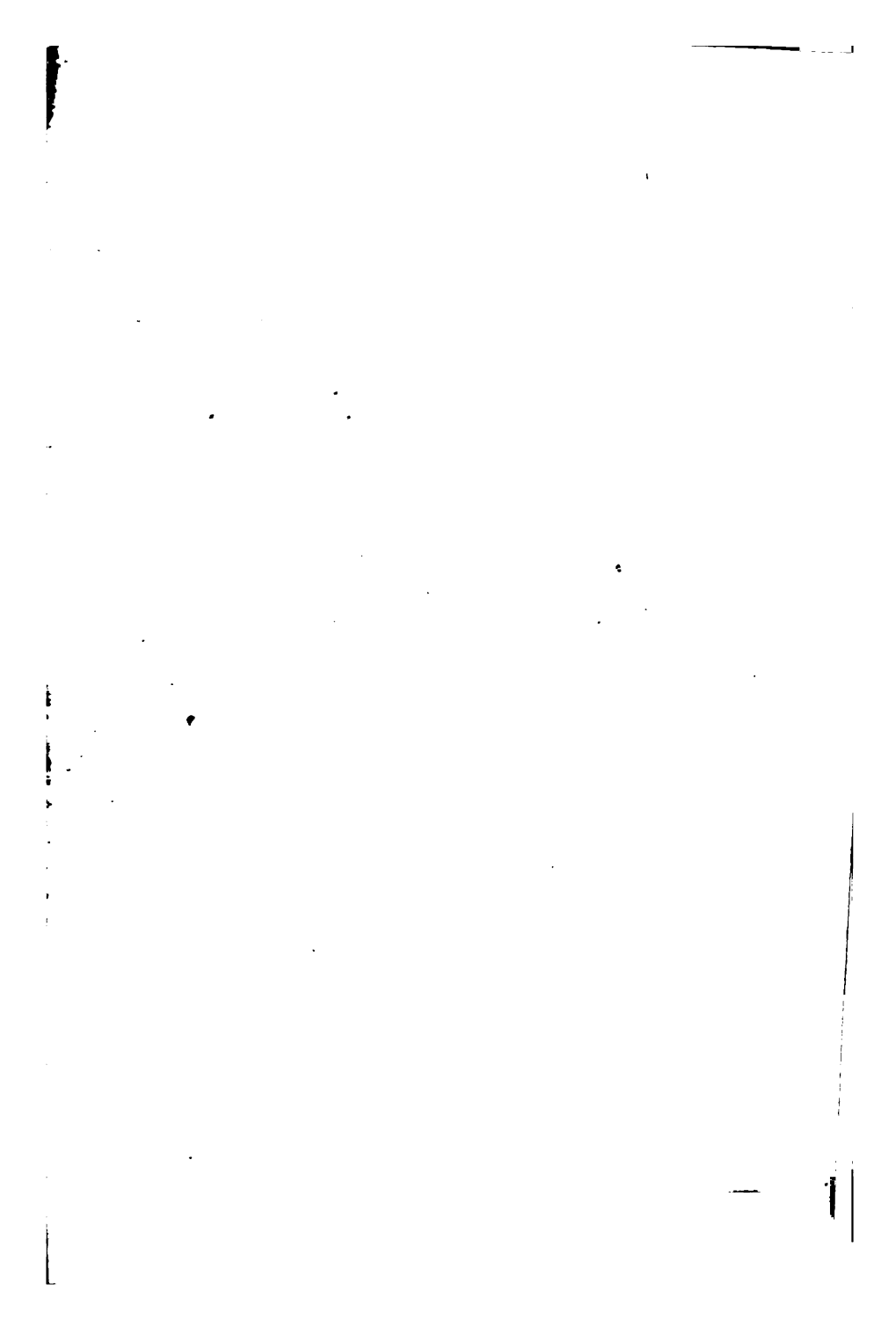
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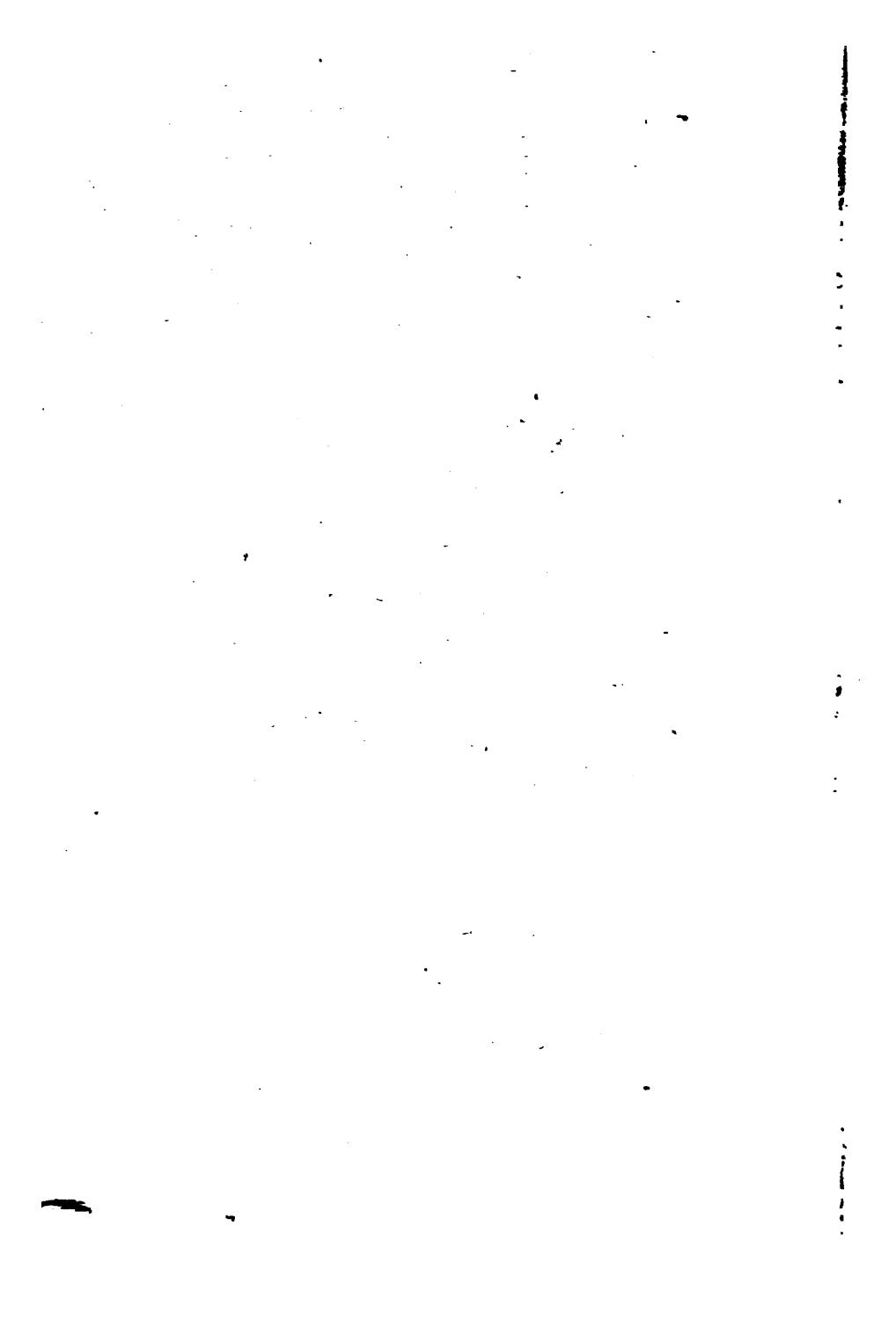












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